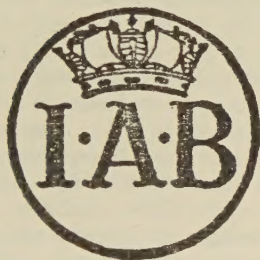


HELMINTHOLOGICAL ABSTRACTS

incorporating

BIBLIOGRAPHY OF HELMINTHOLOGY

For the Year 1935.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY

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HELMINTHOLOGICAL
ABSTRACTS

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INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY
FOR THE YEAR 1935.

Vol. IV, Part 5.

470—Acta Instituti et Musei Zoologici Universitatis Atheniensis.

- a. PANDAZIS, G.—“Recherches sur la faune helminthologique de la Grèce.
I. Les helminthes signalés chez l'homme.” I (1.2), 27-32. [1935.]

(470a) Trematode infections in man are rare in Greece and are either *Fasciola hepatica* or *Dicrocoelium lanceatum*. In cats *Opisthorchis felineus* is common in the region of the great lakes in Macedonia. Pandazis has seen the eggs once in human faeces. Although the mollusc *Bulinus contortus* var. *cretica* occurs in southern Greece no endemic case of *Schistosoma haematobium* has yet been reported. Of cestodes, *Echinococcus granulosus* is the most common in Greece. It is estimated that 3% of the population are infected. *Taenia saginata* occurs in 3% of adults and in 2% of children. *T. solium* is rare. *Diphyllobothrium latum* is restricted to the lake region in Macedonia. Two cases are mentioned. *Hymenolepis nana* occurs in 16% of the children and 1% of the adults examined. 16% of the children have eggs of *Hymenolepis* under the nails. *Hymenolepis diminuta* and *Dipylidium caninum* are rare; one case of each is recorded. In Athens *Ascaris lumbricoides* occurs in 3.6% of the children and 3.4% of adults, while whip-worm is 13.1% in children and 13.9% in adults; in the country the incidence of both these infections is much higher. *Enterobius vermicularis* occurred in 27.7% of children examined and in 5.8% of adults. 24.5% of the infected children had eggs under the nails. The first endemic case of *Ancylostoma duodenale* to be found in Greece is reported from Corfu.

R.T.L.

471—Acta Pontificiae Academiae Scientiarum Novi Lyncae.

- a. FRANCHINI, G.—“Su di una microfilaria della rana (*Rana esculenta*).” LXXXVIII, 39-40. [1935.]
b. SATTA, E.—“Identificazione di un focolaio di ‘Bilharziosi intestinale’ nella Colonia Eritrea.” LXXXVIII, p. 297. [1935.]

(471a) Franchini briefly describes and illustrates a short (50μ), ensheathed microfilaria of an unknown species from the blood of a *Rana esculenta*. The adults could not be found.

B.G.P.

472—Agriculture and Live-Stock in India.

- a. RAO, M. A. N.—“The most practical methods of control of entozoal parasites in India.” V (6), 609-614. [1935.]

(472a) In this popular article, written for practical farmers in India, Rao deals with the life-history and control of the more important parasites of stock. D.O.M.

473—American Midland Naturalist.

- a. KRULL, W. H.—“Studies on the life history of *Halipegus occidualis* Stafford, 1905.” xvi (2), 129-142. [1935.]
- b. MacGINITIE, G. E.—“Ecological aspects of a California marine estuary.” xvi (5), 629-765. [1935.]

(473a) Krull redescribes *Halipegus occidualis* and also describes the larval stages. Experimentally he has established the snail *Helisoma antrosa* as first intermediate host, and has infected *Cyclops vernalis* and *C. serrulatus* with the cystophorous cercariae released from the snail. The metacercaria is found naturally in the dragonfly, *Libellula incesta*, presumed to be third intermediate host and to be infected as nymphs by eating infected cyclops. The definitive host *Rana clamitans* has been infected by placing a metacercaria in the mouth, its normal habitat. E.M.S.

474—Anales de la Facultad de Medicina de Montevideo.

- a. CHIFFLET, A. & ARDAO, H. A.—“Equinococosis peritoneal secundaria.” xx, 122-150. [1935.]
- b. ARDAO, H. A.—“Quistes hidáticos.” xx, 166-169. [1935.]
- c. ORIHUELA, J.—“Consideraciones sobre un caso de rotura espontánea de la adventicia de un quiste hidático de hígado seguido de coleperitonitis difusa y de aborto del huevo hidático entero en el peritoneo.” xx, 344-353. [1935.]

475—Anales del Instituto de Biología.

- a. CABALLERO, E.—“Una nueva especie de trematodo del intestino de *Dermophis mexicanus*.” vi (3/4), 185-188. [English summary p. 188.] [1935.]
- b. CABALLERO, E.—“Contribución al conocimiento de los nemátodos de las aves de México. I.” vi (3/4), 285-289. [English summary p. 289.] [1935.]

(475a) Caballero describes *Cerchorchis patonianus* n. sp. in the intestine of *Dermophis mexicanus*, the third species to be recorded from amphibians.

B.G.P.

(475b) Caballero describes *Contracaecum hoffmanni* n. sp. from the rectum of *Cochlearius cochlearius*, a wild bird.

B.G.P.

476—Annaes da Academia Brasileira de Ciencias.

- a. FREITAS, J. F. TEIXEIRA DE & LENT, H.—“Duas novas especies do genero *Capillaria* Zeder, 1800, parasitas de *Metachirops opossum* (Temm.). (Nematoda: Trichuroidea).” vii (4), 351-353. [1935.]
- b. TRAVASSOS, L.—“Contribuição ao conhecimento dos Trichostrongylidae.” vii (4), 355-360. [1935.]

(476a) Freitas & Lent give brief descriptions of *Capillaria eberthi* n. sp. and *C. longicauda* n. sp., the former from the oesophagus and the latter from the bladder of *Metachirops opossum*. Their relationships with other species are not discussed. B.G.P.

(476b) The Strongylacanthinae, erected by Yorke & Maplestone (1926) as a subfamily of the Ancylostomidae to contain *Strongylacantha* van Beneden, is here transferred by Travassos to the Trichostrongylidae with an amended diagnosis so as to include in addition the following genera: *Molinostrongylus*, *Nycteridostongylus*, *Torrestrongylus*, *Bradypostrongylus*, and *Tricholeiperia* n.g. The last genus is erected for *T. leiperi* n. sp., from *Trachops cirrhosus*, which is fully described.

Travassos also erects a new subfamily, Spinostrongylinae, to contain *Spinostrongylus* n. g. (for *Histiostrongylus spinosus* Boulenger) and *Histiostrongylus* Molin. The members of the two subfamilies are from Chiroptera and Edentata.

B.G.P.

477—Annaes Paulistas de Medicina e Cirurgia.

- a. SCHWENCK, J.—“Tropismos e tactismos.” xxx (3), 213-227. [1935.]

(477a) In a general discussion on tropisms and tactisms, Schwenck uses as examples numerous types of animal behaviour including the reactions of larval schistosomes, hookworms, *Wuchereria bancrofti*, and *Taenia solium*.

B.G.P.

478—Annales d'Anatomie Pathologique et d'Anatomie Normale Médico-Chirurgicale.

- a. ROQUES, P. & SOHIER, H.—“Lobe accessoire de la face convexe du foie.” xii (8), 953-959. [1935.]

479—Annales de Médecine.

- a. OUTEIRIÑO, J.—“Des recherches sur la prétendue spécificité des réactions de ‘Ghedini-Weinberg’ et de ‘Casoni’ dans le diagnostic de l'échinococcose humaine.” xxxviii (5), 493-509. [1935.]

(479a) Outeiriño finds that in order to use the Weinberg or Casoni reactions in the diagnosis of human hydatid it is first necessary to establish the absence of intestinal helminths as there are antigenic properties common to all the taenias. Positive reactions, using antigen of intestinal taenias are given by carriers of hydatid cyst and vice versa.

P.A.C.

480—Annales du Musée d'Histoire Naturelle de Marseille.

- a. JOYEUX, C. & BAER, J. G.—“Étude de quelques Acanthocéphales d'Indochine.” xxvii (2), 3-15. [1935.]

(480a) A new genus *Pseudoporrorchis* is erected by Joyeux & Baer within the Acanthocephalan subfamily Centrorhynchinae to contain a new species *P. houdemeri* from *Centropus sinensis intermedius* in Indochina. Four species hitherto assigned to the genus *Echinorhynchus* are also included in the new genus, viz., *E. centropusi*, *E. bulbocaudatus*, *E. rotundatus* and *E. centropi*. *Pseudoporrorchis* closely resembles the genus *Porrorchis* Fukui from which it differs in the morphology of the testicles and bursa. The new species is fully described and figured.

Acanthocephalus bufonis (Shiple 1903) is here redescribed from *Bufo melanostictus* Schn. also in Indochina. The authors believe it may be identical with *A. artatus* found in *Rana tigrina* and *Rana* sp. in the same country. Tables of comparison of the various species of *Pseudoporrorchis* and 4 species of *Acanthocephalus* are included. S.G.S.

481—Annales Scientifiques de l'Université de Jassy.

- a. BORCÉA, L. L.—“Nouvelle note sur *Acanthobothrium ponticum* L. Borcéa (n. sp.).” xx, 480-481. [1935.]
- b. BORCÉA, L. L.—“Sur la présence du cestode : *Diphyllobothrium stemma-cephalum* Cobbold comme parasite chez le marsouin *Phocaena phocaena* de la Mer Noire.” xxi, 524-525. [1935.]

482—Annales de la Société Belge de Médecine Tropicale.

- a. RODHAIN, J. & VALCKE, G.—“Quatre nouveaux cas de parasitisme par *Onchocerca volvulus* chez l'Européen.” xv (3), 361-365. [1935.]

483—Annali di Ottalmologia e Clinica Oculistica.

- a. CONTINO, F.—“Considerazioni sul cisticerco della congiuntiva.” LXIII (11), 843-854. [1935.]

484—Arbeiten des Tropeninstituts des Volksgesundheits Kommissariat der SSR Armenien.

- a. PIRUMOW, C. N.—“10 jährige Tätigkeit des Instituts für tropische Krankheiten des Gesundheitskommissariats der SSR Armenien.” II, 11-52. [In Russian: Armenian summary pp. 295-327; German summary pp. 357-359.] [1935.]
- b. KALANTARIAN, H. W.—“Die Helminthosen der Bevölkerung von SSR Armenien und ihre Dynamik von 1924 bis 1933.” II, 234-251. [In Russian: Armenian summary pp. 348-349; German summary pp. 376-377.] [1935.]
- c. BADALJAN, A. I.—“Versuch der Inficierung weisser Ratten mit *Hymenolepis nana*.” II, 252-260. [In Russian: Armenian summary pp. 350-351; German summary p. 378.] [1935.]

(484a) An account of the first decade of work at the Armenian Tropical Diseases Institute, given by the Director, includes [in the Russian text] brief details of the helminthic diseases met with locally. B.G.P.

(484b) Of the 21 species of helminths found in man in Armenia during the decade ending 1933, the two hookworms and *Schistosoma haematobium* were from immigrants and are not endemic. The incidence of helminths remains very high, 90.6% of 4,604 children and 96.3% of 5,971 adults being infected. B.G.P.

(484c) Badaljan was able to infect 65% of month-old white rats with *Hymenolepis nana*, 10% of rats 1½ to 3 months old, and no rats older than this. Eggs appeared from 17 to 22 days after infection, but disappeared after a further 8 to 16 days. Drying the eggs for three or four hours at room temperature slightly reduced the incidence. B.G.P.

485—Arbeiten der Turkmenischen Landwirtschaftlichen Hochschule.

- a. BADANIN, N. V.—“Ein Versuch quantitativer und qualitativer Feststellung bei Kameelen vorkommender parasitisierender Würmer unter Anwendung der Methode voller helminthologischer Obduktionen.” 1, 3-13. [In Russian : German summary p. 14.] [1935.]
- b. BADANIN, N. V.—“Zur Fauna parasitisierender Würmer bei Vögeln, Fam. Cuculidae, in U.S.S.R.” 1, 15-25. [In Russian : German summary p. 26.] [1935.]

(485a) Badanin gives a systematic description of 15 species of worms, parasitic in the two-humped camel. R.H.H.

(485b) Badanin enumerates and gives systematic descriptions of worms which infest cuckoos. He reports the discovery of a new species, *Ascaridia cuculina*. R.H.H.

486—Archief voor de Koffiecultuur.

- a. PFAELTZER, J. W.—“Een onderzoek over de aantasting der koffiewortels door aaltjes.” IX (2), 29-38. [1935.]

(486a) Pfaeltzer gives an account of an investigation on the attack of unnamed nematodes [presumably *Anguillulina similis* and *A. pratensis*] on coffee roots. A method is described for demonstrating nematodes in roots. These are carefully washed and then fixed for 30 minutes in strong Flemming solution, washed for 1 hour and then treated for 24 hours in chrom-acetic acid. After a further wash for 24 hours they are placed in aqua regia for 2 hours, which prevents subsequent blackening of the root tissues, and are then mounted in phenol after a final wash in water. Sections showed that the nematodes penetrate the two outer layers of the root cortex and then form tunnels in it parallel to the long axis of the root. In some roots cavities were found in the cortex filled with nematodes. Attack by nematodes caused the root hairs to rot, but they are not invaded. The tunnels formed by the nematodes may be demonstrated by displacing the air from the roots in warm water, soaking them in Indian ink for 30 minutes, followed by treatment with acidified water for 2 hours, which coagulates the ink, and mounting in phenol. T.G.

487—Archiv für Hydrobiologie und Planktonkunde.

- a. PESTA, O.—“Kleingewässerstudien in den Ostalpen.” XXIX (2), 296-345. [1935.]

(487a) In the course of his ecological study of the pool fauna in the eastern Alps, Pesta records the presence of *Dorylaimus stagnalis*, and also of *Cercaria macrocerca* from *Pisidium obtusale*. B.G.P.

488—Archiv für Klinische Chirurgie.

- a. SHIMIDZU, K.—“Ein Operationsfall von Schistosomiasis cerebri.” CLXXXII, 401-407. [1935.]
- b. GENKIN, I. I.—“Ein Fall von Ascaridenvolvulus, hervorgerufen durch eine enorme Menge von Ascariden.” CLXXXII, 642-644. [1935.]
- c. TOOLE, H.—“Echinococcus der Glutealmuskeln nach Hundebiss am Gesäss.” CLXXXIV, 183-184. [1935.]
- d. TOOLE, H.—“Ein Fall von Tubenechinococcus.” CLXXXIV, 185-187. [1935.]

489—Archiv für Schiffs- und Tropen-Hygiene.

- a. GABRIELJAN, M. J.—“Komplikationen bei der Emetintherapie von seiten des Nervensystems.” xxxix (7), 287-291. [1935.]

(489a) In five cases of Fascioliasis hepatica (and three of amoebiasis), Gabrieljan has used emetine injections and has found that many individuals are intolerant to the drug. Intolerance is shown by the development of central and peripheral nervous symptoms in the form of a polyneuritis, in some cases after a first small injection. B.G.P.

490—Archiv für Wissenschaftliche und Praktische Tierheilkunde.

- a. HEIDEGGER, E.—“Das Zentralnervensystem bei parasitären Lebererkrankungen.” lxix (5), 329-357. [1935.]
 b. ENIGK, K.—“Die Ätiologie der Blinddarm-Leberentzündung der Hühnervögel (Blackhead).” lxix (6), 410-438. [1935.]

(490a) Heidegger has investigated the pathological effects of liver-hydatid and liver-fluke upon the central nervous system of cattle, sheep, pigs and one horse. Toxic changes in the C.N.S., which take the form of a typical glia-reaction, probably follow upon cirrhotic changes in the liver, where the normal detoxicating function is impaired by destruction of liver parenchyma. Detoxication is then undertaken by the glial elements of the C.N.S. The toxins may be of parasitic origin, or may represent products of destruction of liver parenchyma. B.G.P.

(490b) Contrary to general opinion, Enigk discounts the importance of *Heterakis gallinae* in the spread of Blackhead disease in gallinaceous birds. The causative organism lives normally as a saprophyte in the gut and only when the mucosa is damaged can it become pathogenic. Such damage can be caused by the entry of larvae of *H. gallinae* or by a variety of other factors. P.A.C.

491—Archives de la Société des Sciences Médicales et Biologiques de Montpellier.

- a. HARANT.—“Une statistique locale d'examens parasitologiques.” xvi, 197-200. [1935.]
 b. JEANBRAU, E., TRUC, E. & HÉRAN, J.—“Kystes hydatiques du rein ouverts dans le bassin.” xvi, 346-350. [1935.]

492—Archivio Italiano delle Malattie dell'Apparato Digerente.

- a. DIENA, G.—“Su di un caso di schistosomia intestinale.” iv, 580-584. [1935.]

493—Archivio di Radiologia.

- a. VERCESI, R.—“Rilevi radiomorfologici sull'idatide polmonare.” xi, 36-47. [1935.]

494—Archivos do Instituto Biológico.

- a. PEREIRA, C.—“Os Oxyurata parasitos de Lacertilia do Nordeste Brasileiro.” vi, 5-27. [English summary pp. 25-26.] [1935.]
 b. VAZ, Z.—“Sobre a pretensa validez de *Syngamus nasicola* — Preseça do *Syngamus aryngeus* nas fossas nasaes de carneiros do Brasil.” vi, 35-39. [English summary pp. 38-39.] [1935.]

- c. VAZ, Z.—“Lesões produzidas no estomago de cobras por um novo nematoide —*Ophidascaris trichuriformis* n. sp.” VI, 41-44. [English summary p. 44.] [1935.]
- d. VAZ, Z.—“Adaptação ao porco domestico do *Stichorchis giganteus*, parasita de porcos selvagens. Redescrição.” VI, 45-52. [English summary p. 51.] [1935.]
- e. PEREIRA, C.—“Ascaridata e Spirurata parasitos de peixes do Nordeste Brasileiro.” VI, 53-62. [English summary, p. 62.] [1935.]
- f. VAZ, Z.—“Sarna do porco do Matto por *Sarcoptes scabiei suis*, parasita do porco domestico.” VI, 69-70. [English summary p. 70.] [1935.]

(494a) Pereira gives illustrated descriptions of the oxyuroid nematodes found parasitizing 34 of 73 lizards collected in the north-east of Brazil. The new species included are *Pharyngodon travassosi* from *Ameiva* sp., *P. cesarpintoi* from *Cnemidophorus lemniscatus*, and *Spinicauda amarali* from *Ameiva ameiva*. The Pharyngodonidae and Spinicaudinae are re-defined, and a new family, Ozolaimidae, is erected for oxyuroids in which the dorsal lip is absent. B.G.P.

(494b) Vaz records the presence of a *Syngamus*, indistinguishable from *S. laryngeus* of cattle, in the nasal cavities of sheep in Brazil. Finding the disposition of the buccal ribs and the presence or absence of spicules to be variable characters, he denies the validity of *S. nasicola*, upheld by Buckley in 1934. B.G.P.

(494c) Vaz describes *Ophidascaris trichuriformis* n. sp., causing ulcerations affecting all the layers of the stomach in the snakes: *Liophis miliaris*, *Crotalus terrificus*, and *Xenodon merremi* in S. Paulo, Brazil. Both parasite and lesions are illustrated. B.G.P.

(494d) *Stichorchis giganteus*, originally described by Diesing from material collected by Natterer in *Dicotyles* spp., is here redescribed and figured by Vaz from material found in the caecum of the domestic pig in Brazil. B.G.P.

(494e) Pereira gives illustrated descriptions of new species of ascarids from marine fish and spirurids from fresh-water fish in the north-east of Brazil. The new forms are *Porrocaecum rochalimai* n. sp., *Iheringascaris iheringascaris* n. g., n. sp., *Procamallanus wrighti* n. sp., *P. barroslimai* n. sp., and *P. fariasi* n. sp. In most cases the fish are designated by popular names. B.G.P.

(494f) Introducing his note on *Sarcoptes* on a pig, Vaz refers to the danger of wild-animal parasites becoming adapted to domesticated hosts, in which they often cause severe damage. Examples are *Stichorchis giganteus* in pig, *Fascioloides magna* in cattle, and *Nanophyetus salmincola* in dog. B.G.P.

495—Archivos de Medicina Infantil.

- a. KOURÍ, P., BASNUEVO, J. G. & ARENAS, R.—“Una nueva aplicación de la emetina en parasitología.” IV, 21-23. [1935.]

(495a) [For abstract of this paper see Helm. Abs., Vol. III, No. 338a.]

496—Archivos de Medicina Interna.

- a. KOURÍ, P., BASNUEVO, J. G. & FERMOSELLE BACARDÍ, J.—“Poder fascipolida del clorhidrato de emetina.” I, 145-146. [1935.]

497—Archivos de la Sociedad de Biología de Montevideo.

- a. CALZADA, V.—“Sobre los helmintos que parasitan los animales del Uruguay.” VI (1), 32-50. [1935.]
- b. CALZADA, V.—“Sobre *Rhabditis* (Ascaroidea) (formas libres).” VI (1), 74-77. [1935.]

(497a) Calzada gives illustrated descriptions of the following nematodes which are recorded from Uruguay for the first time: *Metastrongylus apri*, *M. brevivaginated*, *Nematodirus filicollis*, *N. spathiger* and *Trichostrongylus extenuatus*.
B.G.P.

498—Arquivos de Cirugía e Ortopedia.

- a. GUTIÉRREZ, A. & RUIZ, V.—“Consideraciones sobre 3 casos de hidatidosis genital femenina.” II, 275-283. [1935.]

499—Boletín de la Academia de Ciencias Exactas, Físicas y Naturales.

- a. LÓPEZ-NEYRA, C. R.—“Sobre algunos géneros de Dilepididae.” I (3), 9. [1935.]

(499a) In what appears to be a summary, or Secretary's Abstract, López-Neyra transfers *Parvirostrum magnisomum* Southwell to *Taufikia*, which genus is moved from the Anoplocephalinae to the Dilepidinae. *Gidhaia* Johri falls under the synonymy of *Taufikia*.
B.G.P.

500—Boletín de la Academia Nacional de Medicina de Buenos Aires.

- a. GREENWAY, D.—“Infestaciones múltiples por *Taenia saginata*.” pp. 961-966. [1935.]

501—Boletín del Instituto de Clínica Quirúrgica.

- a. NIÑO, F. L.—“Triquinosis experimental en la rata.” XI (97/99), 336-350. [1935.]
- b. IVANISSEVICH, O. & INTROZZI, A. S.—“Diagnóstico de la hidatidosis ósea.” XI (97/99), 373-378. [1935.]

(501a) Niño traces the life-history of *Trichinella spiralis* in rats in a series of experiments lasting 84 days. He has not found adults below the *muscularis mucosae*, and he finds that the larvae encyst within muscle fibres, the cyst having three layers.
B.G.P.

502—Boletín Mensual de la Clínica de la Asociación de Damas de La Cavadonga.

- a. KOURÍ, P., SILVEIRA, R. & ANIDO, H.—“Un nuevo caso autoctono de fasciolosis hepática humana en Cuba.” II (4), 202-211. [1935.]
- b. KOURÍ, P. & FRADE, A. DEL.—“La clonorchiasis en la ciudad de la Habana.” II (7), 235-248. [English summary p. 247.] [1935.]
- c. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia de Pinar del Río. Pueblo: Consolación del Sur.” II (9), 272-280. [1935.]
- d. KOURÍ, P., CALVÓ FONSECA, R. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia de la Habana: ciudad de la Habana: Colonia Infantil de Tiscornia (año 1931).” II (11), 303-305. [1935.]

(502b) Of 100 Chinese immigrants in the city of Havana, all originating from Canton, 49 were found to be infected with *Clonorchis sinensis* by Kouri & Del Frade. Efficient intermediaries are apparently not present in Cuba, but the authors list the local molluscs and fishes most nearly related to the known Asiatic intermediaries. B.G.P.

503—Boletín de la Sociedad Española de Historia Natural.

- a. LÓPEZ-NEYRA, C. R.—“Sobre una tenia crítica del alcaraván.” xxxv (3/4), 203-216. [1935.]

(503a) López-Neyra describes and figures *Icterotaenia delachauxi* var. *mesacanta* n. var., from *Oediconemus oediconemus*, intermediate between the definitive species found in Africa and the European form *Taenia coronata*. Both species should be transferred to *Choanotaenia*, as also should 11 species of *Anomotaenia*, which genus is suppressed. He erects Monopylidinae n. subf., in the Dilepididae, for *Monopylidium* and transfers *M. unicononatum* to *Choanofuhrmannia*, a genus to be formally proposed in an article shortly to be published. Three other species of *Paricterotaenia* are also discussed. B.G.P.

504—Boletines y Trabajos de la Sociedad de Cirugía de Buenos Aires.

- a. MAZZINI, O. F.—“Cierre sin drenaje en los quistes hidáticos del abdomen con calcificación de la periquística.” xix (27), 1066-1073. [1935.]
b. SUÁREZ, V.—“A propósito de ‘Cierre sin drenaje en los quistes hidáticos del abdomen con calcificación de la periquística.’” xix (28), 1081-1086. [1935.]

505—Bollettino delle Scienze Mediche. Bologna.

- a. GIROLAMI, M.—“La lotta contro la schistosomiasi (Bilharziosi) in Egitto.” cvii, 335-360. [1935.]

506—Botany and Zoology.

- a. KOBAYASHI, H. & SYÔGAKI, Y.—“On *Bothridium pythonis* Blainville, a cestode from *Python reticulatus*.” iii (6), 1135-1140. [In Japanese.] [1935.]
b. OKADA, S.—“On a parasitic nematode in the air-bladder of the salmon.” iii (8), 1451-1456. [In Japanese.] [1935.]
c. KOBAYASHI, H.—“On the genitalia of *Acanthocephala*.” iii (9), 1627-1632. [In Japanese: English summary p. 1631.] [1935.]
d. KOIDZUMI, M.—“Experimental studies on resistance for after-infection of intestinal nematodes.” iii (11), 1909-1918. [In Japanese.] [1935.]
e. KOBAYASHI, H.—“Observation on *Caridinicola indica* a Temnocephalan parasite of *Xiphocaridina compressa* in Lake Biwa.” iii (12), 2124-2128. [In Japanese.] [1935.]
f. FUJITA, T.—“On the parasites of fishes.” iii (12), 2139-2148. [In Japanese.] [1935.]

507—Brasil-Medico.

- a. MACIEL, H.—“Aspectos da esquistosomose intestinal, no Brasil.” xlix (31), 685-692. [1935.]
b. SAMPAIO TAVARES, A.—“Aspectos anatomo-clinicos da schistosomose.” xlix (36), p. 801; (37) p. 823. [1935.]

508—British Journal of Urology.

- a. CAWSTON, F. G.—“The treatment of bilharzia infection by the urologist.” VII, 333-335. [1935.]

509—Bronchoscopie, Oesophagoscopie et Gastrosocopie.

- a. PIAGGIO-BLANCO, R. A. & GARCÍA CAPURRO, F.—“Grosses bronchiectasies ayant régressé dans un kyste hydatique pulmonaire incomplètement vidé. Intérêt de la bronchographie lipiodolée.” pp. 214-224. [1935.]

510—Buletinul Societății de Științe din Cluj.

- a. EPURE, E. X.—“L'anatomie des organes génitaux des *Ascaris vitulorum* Goeze. (L'*Ascaris vitulorum* Goeze est une espèce distincte et non pas une espèce physiologique).” VIII (2), 267-271. [1935.]

(510a) Epure finds that *Ascaris vitulorum* is a valid species. It is more translucent than *A. lumbricoides*, the vulva is at a point 1/7 of the body length from the mouth, the vagina is twice as long, and the uteri half as long as in *A. lumbricoides*. The male genitalia occupy nearly the whole length of the body cavity. B.G.P.

511—Bulletin de l'Académie Royale de Belgique. Classe des Sciences.

- a. WAELE, A. DE.—“Recherches sur les migrations des Cestodes. Cinquième note. Étude de l'infection de l'hôte définitif par la larve hydatique.” Ser. 5, XXI (6), 628-641. [1935.]

(511a) De Waele finds that hydatid fluid is free from oxygen, by the pyrogallic acid test. Evagination of scolices is a function of temperature and is independent of such factors as pH, presence of bile salts, etc. Scolices survive for two or three hours in artificial gastric juice, but are ultimately digested by it. Successive immersion in gastric and intestinal juices leads to immediate digestion. Thus, only scolices protected by the brood-capsule during passage through the stomach can survive in the intestine. Since the numerous hydatids met with in the Ghent area have all been unilocular, de Waele considers this a geographical argument in favour of the specific identity of the alveolar type. B.G.P.

512—Bulletin de l'Académie Vétérinaire de France.

- a. URBAIN, A. & BULLIER, P.—“Un cas de cénurose conjonctive chez un gélada (*Theropithecus gelada* Ruppel).” VIII (6), 322-324. [1935.]
- b. ORLOFF, I. W.—“Le traitement de la dictyocaulose des moutons et des veaux par la méthode des injections intratrachéales en U.R.S.S.” VIII (7), 390-401. [1935.]

(512a) [This paper appears also in Bull. Mus. Hist. Nat. See below No. 516a.]

(512b) Orloff recommends intratracheal injections of iodine against *Dictyocaulus* in sheep and cattle. Since the parasite frequents the posterior lobules of the lungs, the injection is best made with the animal held on its back in a special cradle, the head being slightly raised. Experiments made by various workers in Russia on several thousands of infected sheep and

cattle, show that the iodine is equally effective in the form of the 10% tincture (1 c.c., with glycerine 50 c.c. and distilled water 150 c.c.) or in Lugol's solution (iodine 1, potassium iodide 1.5, distilled water 100, diluted for use 1:400 with tap water), but the latter is less expensive. The solutions are usually given in one or two doses of up to 15 c.c. for sheep and up to 50 c.c. for cattle.

B.G.P.

513—Bulletin. Canterbury Agricultural College. New Zealand.

- a. LESLIE, A.—“Rickets of young sheep in New Zealand, with particular reference to management, feeding and worm control.” 8 pp. [1935.]

(513a) Helminth infection enters into the subject of rickets in sheep, according to Leslie, as a potent factor in predisposition. A survey of 15 Canterbury farms showed that as the mortality from parasitic diseases increased there was a corresponding increase in the incidence of rickets.

J.W.G.L.

514—Bulletin International de l'Académie Polonaise des Sciences et des Lettres, Classe des Sciences Mathématiques et Naturelles, Série B: Sciences Naturelles, (II).

- a. MARKOWSKI, S.—“Über den Entwicklungszyklus von *Bothriocephalus scorpii* (Müller 1776).” 1935 (1/2), 1-17. [1935.]
- b. WIŚNIEWSKI, L. W.—“*Cercaria dubia* sp. n. und deren weitere Entwicklung in *Herpobdella atomaria*.” 1935 (1/2), 19-35. [1935.]
- c. MARKOWSKI, S.—“Einfluss der Milieuveränderungen auf die Entwicklung der Eier von *Bothriocephalus scorpii* (Müller 1776).” 1935 (3/5), 49-58. [1935.]
- d. MARKOWSKI, S.—“Die parasitischen Würmer von *Gobius minutus* Pall. des polnischen Balticums.” 1935 (6/7), 251-260. [1935.]

(514a) Markowski has traced the life-history of *Bothriocephalus scorpii* (= *B. bipunctatus*) which he found adult in the intestine of 97% of the marine fish *Rhombus maximus*. The first intermediary is the copepod *Eurytemora hirundo*, and the second is the fish *Gobius minutus*, upon which *R. maximus* feeds, and in which the plerocercoids occur in the stomach and intestine but not in the body cavity or musculature. Differentiation of the scolex, strobilisation, and the development of genital rudiments occur in the plerocercoids, but no sexually mature forms were found among over 1,000 specimens from *G. minutus*. The coracidium, proceroid and plerocercoid are described and figured.

B.G.P.

(514b) Wiśniewski describes a new species of furcocercous cercaria, *C. dubia*, from *Physa fontinalis*. As second intermediaries for this species, the leech *Herpobdella atomaria* and (to a less extent) *Physa fontinalis* were experimentally implicated. The mollusc *Coretus corneus* was found naturally infected with what is probably the same species. In these second intermediaries a Tetracotyle develops, and this stage is described and figured.

B.G.P.

(514c) Markowski has studied the influence of various concentrations of NaCl on the development of the eggs of *Bothriocephalus scorpii* and finds that development proceeds normally at 0.7 to 46.66‰. Optimum conditions range from 4.66 to 35‰.

R.T.L.

(514d) In *Gobius minutus*, caught near the port of Hel, Markowski has found 9 species of helminths of which one is named as new without any description or other indication.
R.T.L.

515—Bulletins et Mémoires de la Société de Radiologie Médicale de France.

- a. TILLIER, LE GENISSEL & GOINARD.—“Étude radiologique de l'hydatidose.” xxiii (221), 409-410. [1935.]
- b. DUBOUCHER, H. & BLONDEAU, A.—“Un cas d'opacités arrondies multiples du thorax.” xxiii (221), 436-441. [1935.]
- c. DUBOUCHER, H., BLONDEAU, A. & TILLIER, R.—“Sur l'évolution d'un cas d'échinococcose vertébrale.” xxiii (221), 465-468. [1935.]

516—Bulletin du Musée d'Histoire Naturelle.

- a. URBAIN, A. & BULLIER, P.—“Un cas de cénurose conjonctive chez un Gélada (*Theropithecus gelada* Ruppel).” Ser. 2, VII (4), 245-246. [1935.]

(516a) [This paper appears also in Bull. Acad. Vét. France. See above No. 512a.]

517—Bulletin of the Ophthalmological Society of Egypt.

- a. EL-TOBGY, A. F. & WILSON, R. P.—“The ocular complications of the endemic diseases in Egypt.” xxviii, 1-8. [1935.]
- b. SOLIMAN, A. M.—“Effect of endemic diseases on the eye.” xxviii, 9-11. [1935.]

518—Bulletin Ornithologique Romand.

- a. FUHRMANN, O.—“Les Ténias des oiseaux.” I (4), 114-117. [1935.]

(518a) Fuhrmann shows how cestode population can be utilized to prove or disprove relationships of various groups of birds, and even, in the case of the African and South American ostriches, to lend support to the theory of the separation of these two continents.
E.M.S.

519—Bulletin of the Puerto Rico Agricultural Experiment Station.

- a. VAN VOLKENBERG, H. L.—“Parasites and parasitic diseases of horses in Puerto Rico.” No. 37, 19 pp. [1935.]

(519a) Van Volkenberg gives a popular description of the helminth parasites of the horse occurring in Puerto Rico. Control, treatment and local distribution are discussed.
J.W.G.L.

520—Bulletin of the San Juan de Dios Hospital of Manila.

- a. NIEVA, D. E.—“Epileptiform convulsions probably due to schistosomiasis. (Report of a case).” ix (7), 234-237. [1935.]

521—Bulletin de la Société Belge d'Ophtalmologie.

- a. STROOBANTS, C.—“Filaire sous-conjonctivale de l'oeil.” No. 71, pp. 213-215. [1935.]

522—Bulletin de la Société d'Études Scientifiques d'Angers.

- a. BRETON,—“Les vers rouges des Gallinacés.” LXIV, 33-36. [1935.]

(522a) In a popular article Breton considers the life history of *Syngamus trachea* and believes it to be direct. He recommends a course of pyrethrum as an anthelmintic to kill the larvae in the intestine, before they have time to migrate to the lungs.

P.A.C.

523—Bulletin de la Société de Pathologie Exotique.

- a. MONTESTRUC, E. & BERTRAND, C.—“A propos d'un cas de lymphangite tropicale.” XXVIII (7), 612-614. [1935.]

524—Bulletins de la Société de Pédiatrie de Paris.

- a. FÈVRE, M. & PETIT, P.—“Deux cas de kyste hydatique du foie chez l'enfant, dont un avec rupture.” XXXIII, 597-603. [1935.]
 b. ARMAND-DELILLE, P., LESTOCQUOIS, C. & BOYER, J.—“Un cas d'ascaridiose massive et persistante avec anémie et éosinophilie chez un enfant de 18 mois.” XXXIII, 703-707. [1935.]
 c. GIRAUD, P., SALMON & JOUVE.—“Kyste hydatique du rein chez un enfant de 10 ans.” XXXIII, 718-724. [1935.]

525—Bulletin de la Société Zoologique de France.

- a. DORIER, A.—“Un nouveau *Gordius* d'Indochine: *Chordodes joyeuxi* n. sp.” LX (3/4), 321-324. [1935.]
 b. JOYEUX, C. & BAER, J. G.—“Notices Helminthologiques.” LX (6), 482-501. [1935.]

(525b) Joyeux & Baer present four notes on cestodes. (i) *Taenia laticollis* from various carnivores is re-described and shown to be distinct from *T. taeniaeformis*. (ii) Witenberg's recent revision of *Mesocostoides* [see Helm. Abs. Vol. III, No. 302a], reducing 24 species to 3, had suppressed the type *M. ambiguus*; the authors find that this is a valid species and redescribe it. (iii) The two species from cormorants: *Taenia scolecina* Rud., 1819 and *Dilepis scolecina* J. & B., 1928 are found, on comparison, to be distinct species of *Paradilepis*. *P. scolecina* (Rud.) has as synonym the type *P. duboisi* Hsü, while *D. scolecina* falls into the synonymy of *Oligorchis delachauxi* as *P. delachauxi* (Fuhm.). The cestodes erroneously ascribed in 1930 to *Dilepis delachauxi* are renamed *Paradilepis macracantha* nom. nov. (iv) *Disculiceps* and *Disculicipitidae* are proposed as new names for *Discocephalum* and *Discocephalidae*, both preoccupied. *Bothridium pithonis* var. *minor* J. & B. should be dated 1928, and not 1926 as it is in J. & Houdemer, 1928.

B.G.P.

526—Bulletin of the West Virginia University Agricultural Experiment Station.

- a. RIETZ, J. H.—“Copper sulphate as an anthelmintic for gastro-intestinal parasites of sheep.” No. 264, 20 pp. [1935.]

(526a) Rietz found that the treatment of sheep at intervals of 21 days with a 1½% solution of copper sulphate effectively reduced the gastro-intestinal

nematodes and tapeworms. Fasting the animals for 24 hours before drenching increased the efficiency of the anthelmintic and apparently assisted its passage directly to the abomasum. Good feeding was found to be an essential factor in successful treatment. The paper contains numerous tables giving egg-counts taken at different stages during the experiments and also the results of post-mortem examination. D.O.M.

527—Campo. Agricultura, Industria, Comercio. Rio de Janeiro.

- a. PINTO, C. & ALMEIDA, J. LINS DE.—“Sinopse dos helmintos animais domesticos do Brasil.” VI (8), 54-63. [1935.]
- b. PINTO, C.—“Variações morfológicas observadas no *Eurytrema fastosum* (Kossack, 1910). Trematoda—Dicrocoelidae.” VI (10), 50-52. [1935.]
- c. PINTO, C.—“Contribuição ao estudo do *Stephanurus dentatus* Diesing, 1839, agente etiologico do estefanurose dos suínos. Strongylata. Stephanuridae.” VI (11), 27-30. [1935.]
- d. TRAVASSOS, L.—“Sobre um novo Trichostrongylideo parasito de Columbigídeos.” VI (12), p. 54. [1935.]

(527a) Pinto & Almeida catalogue the more common helminth parasites of domestic stock, both avian and mammalian, in Brazil, noting their frequency and importance as disease producers. Lesions are often photographed. Geographical distribution within Brazil is considered. P.A.C.

(527b) Pinto describes some variations in the genitalia of *Eurytrema fastosum* from the cat. The testes may be smooth in outline or constricted, as may be the ovary. The cirrus sac shows differences in size while the vitelline glands are frequently asymmetrical and in one case had only developed on one side of the worm. P.A.C.

(527d) Travassos describes *Ornithonema mensoris* n. g., n. sp., a trichostrongylid parasite of pigeons in Brazil. It can be recognized by the possession, in the male, of a bursa which has asymmetrical lateral lobes. It is related to *Ornithostrongylus* and *Lutzinema*. P.A.C.

528—Capita Zoologica.

- a. ALLGÉN, C.—“Die freilebenden Nematoden des Öresunds.” VI (3), 1-192. [1935.]

(528a) Allgén deals with free-living nematodes collected during 1928-29 from the Öresund, i.e., the region of the Cattegat which separates Zealand (Denmark) from the southern part of Sweden. Following a brief introduction and a list of 47 collecting stations, the author sets out the findings systematically under orders, families, genera and species. The bulk of the paper is taken up with descriptions, etc., of the 221 species found, which include 45 n. spp. and the following new genera: *Heterocyatholaimus*, *Filipjeviella*, *Nijhoffia* and *Alaimonemella*. The work is completed with tables of distribution, discussions on various bionomical aspects of the findings, a map and 10 plates of line drawings. T.G.

529—China Journal.

- a. HAUGHWOUT, F. G.—“Observations on certain intestinal diseases in the foreign population of Shanghai.” XXII (6), 341-349. [1935.]

(529a) In 595 individuals of European races living in good circumstances and residing in thoroughly sanitary surroundings in Shanghai, eggs of *Ascaris lumbricoides* occurred in 69, of *Trichuris trichiura* in 59, of hookworm in 5 and of *Clonorchis sinensis* in 1.
R.T.L.

530—Circular. Tennessee Agricultural Experiment Station.

- a. WHITTLE, W. O. & DRAIN, B. D.—“The root-knot nematode in Tennessee: its prevalence and suggestions for control.” No. 54, 8 pp. [1935.]

531—Clinica Veterinaria. Milano.

- a. CATTANEO, F.—“A proposito della cisticercosi bovina. È proprio l'esofago la sede di predilezione del *Cisticercus bovis*?” LVIII (1), 53-58. [1935.]
- b. DE-LEIDI, G.—“A proposito della cisticercosi bovina.” LVIII (6), 488-489. [1935.]
- c. POSTIGLIONE, E.—“Il servizio veterinario e le più gravi malattie diffusibili del bestiame nelle nostre Colonie dell'Africa Orientale.” LVIII (8), 614-690. [1935.]
- d. SPENA, A.—“Sulla ascaridiosi dei polli.” LVIII (11), 863-869. [1935.]

(531c) In this extensive account by Postiglione of the major diseases confronting the Veterinary Service in Italian East Africa, there appears a section (pp. 674-677) dealing with a serious disease of camels due to an intestinal infestation with *Anthostrongylus somalilensis*, a skin-penetrating trichostrongyle.
B.G.P.

(531d) Spena is of the opinion that *Heterakis* spp. may be a cause of mortality among gallinaceous birds either by rupturing the gut wall or by causing large nodules. The important species concerned are *H. papillosa*, *H. inflexa*, *H. compar* and *H. differens*.
P.A.C.

532—Clujul Medical.

- a. RADULET, V.—[Case of pulmonary hydatid cyst with extraordinary roentgenologic aspect.] XVI, 654-655. [1935.]

533—Compte Rendu Mensuel des Séances de la Classe des Sciences Mathématiques et Naturelles. Académie Polonaise des Sciences et des Lettres. Cracovie.

- a. WIŚNIEWSKI, L. W.—“La *Cercaria dubia* sp. n. et son évolution dans l'*Herpobdella atomaria*.” No. 1, p. 5. [1935.]
- b. MARKOWSKI, S.—“Sur le cycle évolutif du *Bothriocephalus scorpii* (Müller, 1776).” No. 1, p. 6. [1935.]
- c. MARKOWSKI, S.—“L'influence des changements du milieu sur le développement des oeufs de *Bothriocephalus scorpii* (Müller, 1776).” No. 4, p. 8. [1935.]
- d. MARKOWSKI, S.—“Les vers parasites de *Gobius minutus* Pall. de la Baltique polonaise.” No. 7, p. 8. [1935.]

(533a, b, c, d.) [For abstracts of these papers see above Nos. 514a, b, c, d.]

534—Cornell Veterinarian.

- a. FROST, J. N. & ERRINGTON, B. J.—“Fistulous withers and poll evil.” *xxv* (2), 177-183. [1935.]
- b. MILKS, H. J.—“Unusual case of whipworms.” *xxv* (4), p. 386. [1935.]

(534a) Frost & Errington refer only incidentally to *Onchocerca cervicalis*; their treatment for poll evil and fistulous withers is given. J.W.G.L.

(534b) Milks describes a case of whipworms in which a two year old bitch was in excellent condition and appeared normal except for diarrhoea. None of the usual anthelmintics were effective. At autopsy the colon and anterior part of the rectum were much dilated and packed full of whipworms. J.W.G.L.

535—Crónica Medico-Quirúrgica de la Habana.

- a. CALVO FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia de Pinar del Río. Pueblo: San Juan y Martínez.” *LXI*, 450-457. [1935.]
- b. KOURÍ, P., SELLEK AZZI, A. & RIVERA, R.—“Sobre el tratamiento de la strongyloidosis por el violeta de genciana.” *LXI*, 548-557. [1935.]
- c. CALVO FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba.” *LXI*, 577-585. [1935.]

536—Deutsche Zuckerindustrie.

- a. GOFFART, H.—“Zum Anbau von Raps, Rübsen und Senf auf Rübennematodenböden.” Nr. 49, I.Beilage, pp. 1041-1042. [1935.]

(536a) Goffart records experiments to determine the effects of rape, turnip-rape and mustard on the cyst content of “beet-sick” land. Autumn-sown rape and turnip-rape were found to produce one generation of nematodes in certain districts before the onset of winter; many larvae which entered the roots in autumn hibernated and completed their development in spring. From 23 to 52 days elapsed between autumn sowing and the appearance of cysts, the time varying with temperature. A second generation of the nematode developed on these hosts in the spring and it is concluded that their cultivation is definitely injurious on “beet-sick” land. Mustard was found to increase the cyst content of soil rather less than rape and turnip-rape. M.J.T.

537—Difesa Sociale.

- a. RAVICINI, S.—“Di alcune malattie gravi da parassiti animali, frequenti nelle regioni africane. Parte Terza.” *xiv* (11), 684-694. [1935.]

(537a) In the third part of his article on common parasitic diseases of man in Africa, Ravicini briefly reviews the helminthic diseases. As he says, he has nothing new to expound. B.G.P.

538—Écho Médical du Nord.

- a. DETROY, —“Filaria loa sous-conjonctivale.” *iv* (43), 741-742. [1935.]

539—Ergebnisse der Gesamten Medizin.

- a. BRÜNING, H.—“Die Wurmkrankheiten des Kindes.” *xx*, 1-32. [1935.]

540—Farming in South Africa.

- a. MÖNNIG, H. O.—“Bankrupt worms in Persian sheep.” x (115), p. 419. [1935.]

(540a) Mönnig gives a popular description of the life cycle, symptoms and treatment of *Trichostrongylus* infections in sheep which are of wide occurrence in South Africa. He points out that much more damage is done to Persian sheep than to Merino sheep and that treatment of sheep infected with *Trichostrongylus* species with arsenical preparations is dangerous, but recommends a mixture of copper sulphate and nicotine, for which the following doses are given:—for ages 1 to 3 months, $\frac{1}{2}$ to $\frac{3}{4}$ oz.; 3 to 6 months, $\frac{3}{4}$ to 1 oz.; 6 to 12 months 1 to $1\frac{1}{2}$ oz.; over 12 months, $1\frac{1}{2}$ to 2 oz., depending on condition in each case. The mixture is made up with 1 oz. copper sulphate and 1 fluid oz. tobacco extract (40% nicotine) in 3 pints water. J.W.G.L.

541—Finska Läkarsällskapets Handlingar.

- a. TÖTTERMAN, G.—“Om benmärgspunktion, med särskilt beaktande av benmärgen vid den perniciösa botriocefalusanemin.” LXXVII, 547-557. [1935.]

542—Fischereizeitung.

- a. WILDE, H.—“Der Schleindactylogyrus (*Dactylogyrus macracanthus*) und die Schädigung der Schleienkieme durch diesen Parasiten.” XXXVIII. [1935.]

543—Folia Clinica et Biologica.

- a. PESSÔA, S. B.—“Infestação natural da pulga do rato *Ctenopsyllus musculi* pelo cysticercoide da *Hymenolepis diminuta*.” VII (3), 101-102. [1935.]

(543a) Pessôa has found a rat flea *Ctenopsyllus musculi* naturally infested in the body cavity with a fully developed, viable cysticercoide of *Hymenolepis diminuta*. In view of this discovery he considers that the possibility of fleas or other intermediate hosts as important vectors should not be overlooked. P.A.C.

544—Folia Zoologica et Hydrobiologica.

- a. ALLGÉN, C. A.—“Ueber einige freilebende marine Nematoden aus den Sammlungen des Hamburger Zoologischen Museum.” VIII (1), 25-33. [1935.]
- b. ALLGÉN, C.—“Das Männchen des *Actinolaimus africanus* Filipjev.” VIII (1), 33-35. [1935.]
- c. STRAND, E.—“Miscellanea nomenclatorica zoologica et palaeontologica. VIII.” VIII (1), p. 176. [1935.]

(544a) Allgén has examined a number of small collections of marine nematodes housed at the Hamburg Zoological Museum. All the species identified are already known to science except in the case of *Viscosia strandi* n. sp., one young male and one larva of which were obtained in a collection from the Murmansk coast. T.G.

(544b) In a collection of nematodes from Zanzibar at the Hamburg Zoological Museum, Allgén found for the first time males of *Actinolaimus africanus* Filipjev, 1929, females only of which had been known previously. A description is given with measurements and proportions. T.G.

(544c) Strand amends *Bolbocephalus* Dubois, 1934 to *Bolbocephalodes* nom. nov., giving the family name Bolbocephalodidae (Trematoda). T.G.

545—Frankfurter Zeitschrift für Pathologie.

- a. LÖRINCZ, F.—“Anchylostomiasis sine morbo.” XLVIII (3), 327-334. [1935.]

546—Gaceta Médica de Caracas.

- a. CARVALLO, T.—“Anotaciones críticas al estudio ‘Obstrucción intestinal causada por el *Ascaris lumbricoides*’ del Dr. J. R. Hernández d’Empaire.” XLII (17), 264-266. [1935.]
- b. RAFAEL RÍSQUEZ, J.—“Parasitismo por *Ascaris lumbricoides* verificado en Caracas (en 25,000 análisis).” XLII (22), p. 347. [1935.]
- c. HERNÁNDEZ D’EMPAIRE, J. R.—“Obstrucción intestinal causada por *Ascaris*.” XLII (24), 369-373. [1935.]

547—Gazette Médicale de France.

- a. PIÉRI, J.—“Diagnostic des diarrhées parasitaires.” pp. 653-658. [1935.]

548—Gazzetta Internazionale di Medicina e Chirurgia.

- a. D’ALESSANDRIA, E.—“Il ricambio basale nelle anemie da anchilostoma duodenale.” XLV, 545-550. [1935.]

549—Giornale Italiano di Malattie Esotiche e Tropicali ed Igiene Coloniale.

- a. IMPALLOMENI, R.—“Il parassitismo intestinale in Cirenaica.” VIII (5), 114-120. [1935.]
- b. AMICIS, A. DE.—“Un caso autoctono di filariasi da *Filaria bancrofti* osservato in Italia.” VIII (7), 167-169. [1935.]

550—Indian Journal of Pediatrics.

- a. BANERJEA, J. C.—“Treatment of hookworm anaemia with massive doses of iron.” II, 314-317. [1935.]

551—Indian Veterinary Journal.

- a. HAJI, C. S. G.—“Preliminary notes on a disease of sheep and goats locally known as ‘Phet or Pitto’.” XII (1), 18-21. [1935.]

(551a) Haji describes the symptoms and post-mortem findings of a disease of sheep and goats in India locally known as “phet” or “pitto” occurring in low lying marshy lands. The disease is considered to be due to helminths and a list of the species recovered at autopsy is given. Mortality is 90%. Treatment on a small scale with Danistol capsules met with good results.

J.W.G.L.

552—Industria Saccarifera Italiana.

- a. MUNERATI, O.—“La barbabietola quale specie ospite della *Heterodera marioni* (sin. *H. radicolica*).” XXVIII (2), 58-61. [1935.]

(552a) Munerati describes a wide series of polarization tests which prove that sugar beet infected by *Heterodera marioni* is undesirable material for sugar extraction. Even light infestations cause considerable damage as the galls cannot be completely separated from the tap root. M.J.T.

553—Japanese Journal of Zoology.

- a. ISHII, N.—“Brief note on a new species of fish trematodes, *Urorchis imba*.” VI (3), 547-549. [1935.]

(553a) *Urorchis imba* n. sp. is described from the intestine of *Pseudorasbora parva* in Chiba Prefecture of Japan and is differentiated from *U. goro* Ozaki. R.T.L.

554—Journal of the American Medical Association.

- a. LeCOMTE, R. M.—“The management of renal tumors including cysts.” CV (24), 1963-1965. [1935.]

555—Journal of the American Veterinary Medical Association.

- a. SCHROEDER, C. R. & WEGEFORTH, H. M.—“The occurrence of gastric ulcers in sea mammals of the California coast, their etiology and pathology.” LXXXVII (3), 333-342. [1935.]

(555a) Certain gastric ulcers found in the Californian sea lion are associated with the invasion of the stomach wall by *Anisakis similis*. R.T.L.

556—Journal of the Central Society for Veterinary Medicine. Tokyo.

- a. SUGIMOTO, M.—“On the Filaria from domestic fowls in Formosa.” XLVIII (4), 277-289. [In Japanese.] [1935.]

557—Journal of Chemotherapy.

- a. GREENWOOD, D. N.—“Chemotherapy of experimental trichiniasis.” XII, 232-234. [1935.]

558—Journal de Chirurgie.

- a. GOINARD, P. & VIGNARDOU, M.—“La chirurgie des kystes hydatiques calcifiés.” XLVI (3), 321-346. [1935.]

559—Journal of the Colorado-Wyoming Academy of Sciences.

- a. SCOTT, J. W.—“The plerocercoids of Yellowstone Lake trout.” II (1), p. 82. [1935.]

560—Journal of Comparative Pathology and Therapeutics.

- a. STEWART, W. L. & PIERCY, S. E.—“Border pinning in sheep. I.” XLVIII (3), 157-191. [1935.]

(560a) Stewart & Piercy give an account of their investigations into the cause of “pinning” in Northumbrian hill sheep.

Blood analyses and faecal examinations extending over a period of about 18 months were carried out on both "pining" and "non-pining" sheep and it was found that the worm egg counts in the faeces varied inversely with the haemoglobin values.

Post-mortem examinations revealed heavy infections with trichostrongyles and the authors conclude that in many cases "pining" can be attributed to parasitic gastritis and enteritis. D.O.M.

561—Journal of the Japanese Society of Veterinary Science.

- a. ISSHIKI, O.—"An anatomical view of a monkey infected with *Oesophagostoma intestinalis* and studies on *Oesophagostomum apiostomum* (Willach, 1891)." XIV, 65-97. [In Japanese : English summary pp. 99-102.] [1935.]
- b. ICHIOKA, A. & KATO, T.—"Über die Pathogenese von den Blutschwitzen des Pferdes." XIV, 194-219. [In Japanese : German summary pp. 217-218.] [1935.]
- c. ONO, S.—"Studies on the trematodes, invading *Limnaea* snails as the first intermediate hosts, found in the vicinity of Mukden. II. On the encystation and development of Echinostomidae." XIV, 232-248. [In Japanese : English summary pp. 245-246.] [1935.]

(561a) The pathological findings of an infection with *Oesophagostomum apiostomum* in a *Macacus rhesus* are reported. R.T.L.

(561b) *Filaria haemorrhagica* is always present in the subcutaneous fatty tissues of the lesions known as bloody sweat in horses. The larvae occur in the extravasated blood. The clinical and pathological changes are set up by the larvae as they hatch from the host. The larvae do not remain in the tissues long but gain access to the blood stream. R.T.L.

(561c) Previous infestation of *Limnaea* spp. with *Echinostoma*, *Plagiorchis* or *Schistosoma* does not inhibit subsequent penetration and cyst formation of Echinostome cercariae in the bodies of these snails. The domestic duck was found infested with *Echinostoma gotoi* and *E. revolutum* after feeding with encysted larvae from *Limnaea*. R.T.L.

562—Journal of the Marine Biological Association of the United Kingdom.

- a. LEBOUR, M. V.—"*Hemius communis* in *Acartia*." XX (2), 371-372. [1935.]

563—Journal de Médecine de Bordeaux et de la Région du Sud-Ouest.

- a. MANDOUL, H.—"Les vers intestinaux." CXII (32), 895-898. [1935.]

564—Journal de Médecine de Paris.

- a. ROUËCHE & TERRASSE, J.—"L'helminthiase de l'enfant et son traitement." LV (10), 205-210. [1935.]

(564a) [This paper also appears in Méd. Infant. See below No. 583a.]

565—Journal of the Medical Association of Georgia.

- a. SANFORD, S. P.—"Hookworm disease as focus of infection." XXIV, 365-369. [1935.]

566—Journal of Morphology.

- a. WILLEY, C. H.—“The excretory system of the trematode, *Typhlocoelum cucumerinum*, with notes on lymph-like structures in the family Cyclocoelidae.” LVII (2), 461-470. [1935.]

(566a) In many features the excretory system of *Typhlocoelum cucumerinum* resemble the lymph system of the Amphistomes. Since the vessels communicate with the excretory vesicle and no other excretory organs occur the structure must be interpreted as excretory. The single network of vessels in *Typhlocoelum* shows characteristics of both lymph and excretory systems and probably carries on the functions of both. It is stated that *T. americanum* shows no significant differences from *T. cucumerinum* and is to be regarded as a synonym.

R.T.L.

567—Journal of the Public Health Association of Japan.

- a. SASAKI, T.—“A case of carbon-tetrachloride poisoning.” XI (5), 1-3. [1935.]
- b. OHASHI, K.—“The results obtained in Hyogo Prefecture by the use of improved privies of the Home Office design on the prevention of parasite diseases.” XI (6), 1-4. [1935.]
- c. TAKASAKI, J.—“Prevalence of intestinal parasites, particularly of hookworms in Saitama Prefecture and its prevention work.” XI (10), 1-12. [1935.]

(567b) Statistics are given to show the diminution in the percentage of infections with various helminth parasites in two Japanese villages which has followed on the introduction of a privy of “Home Office design.” Apart from the fact that the faeces are retained for three months in the privy, which appears to have at least five chambers, no details are given of this new contraption.

R.T.L.

568—Journal of Science of the Hiroshima University, Series B, Division I, Zoology.

- a. OZAKI, Y.—“Trematode parasites of Indian porpoise *Neophocaena phocaenoides* Gray.” III, 115-138. [1935.]
- b. OZAKI, Y.—“Studies on the frog-trematode *Diploorchis ranae*. I. Morphology of the adult form with a review of the family Polystomatidae.” III, 193-225. [1935.]

(568a) From *Neophocaena phocaenoides* from the southern seas of Japan three trematode species, *Orthosplanchnus elongatus* n. sp., *Campula folium* n. sp. and *Nasitrema spatulatum* n. g., n. sp. are described. A formal statement of the chief characters of the genus *Nasitrema* is given. It is related to Fasciolopsinae but is placed by Ozaki in a new subfamily Nasitrematinae.

R.T.L.

(568b) While *Polystoma integerrimum* is rare in Japan, *Diploorchis ranae* is very common. Ozaki describes the latter species in detail. He gives keys for the six genera of Polystomatidae and for the thirteen species of the genus *Polystomoides*. Two new species are included, viz., *P. japonicum* and *P. exhamatum* from *Clemmys japonicus*. Ozaki adopts Ward's suggestion that *P. coronatum* Leidy, 1888 should be given generic rank and creates for it *Parapolystoma* n. g. with *P. bulliense* Johnston, 1912 as type and with *P. alluaudi* as a third species.

R.T.L.

569—Journal of the Shanghai Science Institute. Section IV.

- a. YOUNG, S.—“The blood picture in human fasciolopsiasis (*F. buski*).” I, 177-199. [1935.]
- b. KOMIYA, Y., KAWANA, H. & TAO, S. C.—“Study on *Clonorchis sinensis* in the district of Shanghai. I. Epidemiology of human Clonorchiasis.” I, 271-292. [1935.]

570—Journal of the South African Veterinary Medical Association.

- a. MÖNNIG, H. O.—“Oesophagostomiasis in sheep.” VI (4), 250-252. [1935.]

(570a) Mönnig's brief account of the anthelmintic treatment of oesophagostomiasis in sheep is more fully dealt with elsewhere [see below No. 600a]. J.W.G.L.

571—Journal of the Tennessee Academy of Science.

- a. HARWOOD, P. D.—“Notes on Tennessee helminths. II. Two new species of *Strongyluris* (Nematoda) and notes on the genus.” X (2), 131-141. [1935.]

(571a) Harwood remarks on the confusion which exists in present-day literature owing to the fact that several older species of *Strongyluris* are inadequately described, and few redescrptions are available. He gives a redescription of *S. ornata* (Linstow, 1897) Baylis & Daubney, 1922 from *Agama agama turnensis* and *A. atricollis* from Tanganyika. Two new species of *Strongyluris* are then described, viz., *S. media* n. sp. in *Chamaeleon multituberculata* from East Africa and *S. rubra* n. sp. in *Sceloporus undulatus* (rail fence lizard) from Nashville, Tennessee and Raleigh, N. Carolina. *S. rubra* is the first recorded member of this genus from North America and resembles *S. elegans*, from which it is easily separated by the lesser number of caudal papillae and by the blunt end of the tail spike. Harwood concludes his paper with a key to the species of *Strongyluris*, based mainly on the presence or absence of somatic papillae. A.E.F.

572—Journal d'Urologie Médicale et Chirurgicale.

- a. DIAMANTIS, A.—“Le cancer bilharzien vésical; à propos de onze cas personnels dont deux cas de cancer bilharzien vésical non infecté.” XL (5), 408-432. [1935.]

573—Jugoslovenski Veterinarski Glasnik.

- a. KOCJAN, L.—“Bolezni golobov v severnih krajih Jugoslavije s posebnim ozirom na enzootska paratifoza obolenja.” XV, 67-77. [In Serbo-Croatian: German summary p. 76.]

(573a) [Cases of sickness of pigeons in the northern districts of Yugoslavia with special reference to enzootic paratyphoid disease.]

574—Kinderärztliche Praxis.

- a. RIETSCHEL, H.—“Zur Behandlung der Oxyuriasis.” VI (11), 485-488. [1935.]

(574a) Rietschel is convinced that internal re-infection occurs in human threadworm infections. Hence, whilst the usually advocated control

measures are of value in preventing oral infection, they are by themselves inadequate. The propagating threadworm can be attacked, however, by giving the patient a diet unfavourable to the parasite over a period of a fortnight with subsequent repetitions if necessary. Such a diet consists of plentiful proteins and fats, with sugar, toast and fruit juices. The object is to avoid cellulose "roughage" entirely, so that fruits (apart from the juice) and vegetables are omitted. This diet has given excellent results in obstinate cases.

B.G.P.

575—Klinicheskaya Meditsina.

- a. FARZANE, G. A. & IBRAGIMOV, K.—[Ileus caused by *Taenia solium*.] XIII, p. 1726. [In Russian.] [1935.]
- b. KHALFEN, S. S.—[Alveolar echinococcus of liver.] XIII, 1902-1905. [In Russian.] [1935.]

576—Klinike. Athens.

- a. PANAYOTATOU, A. G.—[On filariasis.] x, [Reprint 19 pp.] [In Greek.] [1935.]

(576a) Panayotatou gives a general account of Filariasis bancrofti in man, from the pathological and clinical aspects.

B.G.P.

577—Kongelige Norske Videnskabers Selskabs Forhandlinger.

- a. ALLGÉN, C.—"Zur Kenntnis norwegischer Nematoden. I." VII, 16-19. [1935.]
- b. ALLGÉN, C.—"Zur Kenntnis norwegischer Nematoden. II. Neue und wenig bekannte freilebende Nematoden aus Tarva." VII, 35-38. [1935.]

(577a) Allgén reports on marine nematodes of the beach fauna collected at certain localities on the Norwegian coast. Of the 39 species found, 33 were already known to science and these are listed under their appropriate orders with particulars as to numbers and sex for each species.

T.G.

(577b) Allgén continues the description of Norwegian marine nematodes dealing particularly with those taken at Tarva. The following are new to science: *Tarvaia donsi* n. g., n. sp., *Dignathonema norvegicum* n. sp., *Penzancia paravelox* n. sp., and *Enoploides cephalophorus* (Ditl.) var. *tarvaensis*, n. v.

T.G.

578—Lingnan Science Journal.

- a. HSU, Y. C.—"Helminths of cows in Soochow." XIV (4), 605-610. [1935.]
- b. CHEN, H. T.—"The intermediate hosts of *Paragonimus*." XIV (4), p. 695. [1935.]

(578a) In the neighbourhood of Soochow the following helminths occur in cattle, *Fischoederius elongatus*, *Paramphistomum cervi*, *Cotylophoron cotylophorum*, *Paramphistomum chinensis* n. sp. and *Eurytrema pancreaticum*, *Moniezia planissima* and *Setaria papillosa*. The new amphistome is not differentiated from allied species [and would appear to be an immature form].

R.T.L.

(578b) Chen now gives the specific diagnosis of the first and second intermediate hosts of *Paragonimus*, reported by him in 1935 [see Helm. Abs.,

Vol. IV, No. 42b], as *Assimineia lutea* and *Sesarma* (*Sesarma*) *sinensis* and *Sesarma* (*Holometopus*) *dehaani*. The two crabs are often found in the same locality and are easily confused. R.T.L.

579—Lyon Médical.

- a. DUFOURT, A. & ROMAN, E.—“Diarrhée chronique provoquée par *Hymenolepis nana*. Étude du parasite.” CLVI (35), 255-258. [1935.]
- b. GUILLEMINET & GAYET, R.—“Cholécystite aiguë d'origine ascaridienne.” CLVI (52), 775-779. [1935.]

(579a) *Hymenolepis nana* is rare in France. An endemic case is reported from Villeurbanne in which there was an associated chronic diarrhoea.

R.T.L.

580—Maanedsskrift for Drylaeger.

- a. GRINSTED, P.—“Tilfælde af Drejesyge (Coenurosis) hos Kalve med Initialsymptomer og Paavisning af Larvestadiet i Hjernen.” XLVII, 65-68. [1935.]
- b. CHRISTIANSEN, M.—“Forsøg med Overforelse af Kvaeser (*Coenurus cerebralis* til Kalve og Lam.” XLVII, 273-286. [1935.]
- c. CHRISTIANSEN, M.—“De vigtigste smitsomme Sygdomme hos Vildtet.” XLVII, 353-368; 392-403; 449-463; 481-491; 509-517; 539-551; 570-582. [1935.]

(580a) [Case of coenuriasis in a calf with early symptoms and rudimentary larval stages in the brain.]

(580b) Although recent outbreaks of coenuriasis in Denmark have been confined to cattle, suggesting the existence of a specialized variety of *Coenurus cerebralis*, yet Christiansen has shown by experimental feeding via dogs to calves and lambs that this parasite is equally infective to sheep, and that it is quite typical morphologically. B.G.P.

(580c) In these seven sections Christiansen surveys the more important diseases of game animals and birds which have come under his notice in Denmark. Helminths are discussed under the following headings: hares (pp. 449-460); deer (pp. 486-491 & 509-511); carnivores (pp. 516-517) and birds (pp. 572-582). B.G.P.

581—Magasin de Parasitologie de l'Institut Zoologique de l'Académie des Sciences de l'URSS.

- a. KAMALOW, N.—“Zur Fauna der parasitären Würmer bei den Wölfen.” v, 249-251. [In Russian: German summary p. 251.]
- b. LEWASCHOW, M.—“Beiträge zur Kenntnis der pflanzenbewohnenden Nematoden Abchasiens und der kaukasischen Schwarzmeerküste.” v, 301-315. [In Russian.] [1935.]
- c. GURWITSCH, G. A.—“Die Wurzel nematode (*Heterodera marioni* Cornu 1879) (*Heterodera radicola* Greef 1872) an Kulturpflanzen der östlichen Schwarzmeerküste.” v, 317-337. [In Russian.] [1935.]

(581a) Kamalow reports, from 17 grown wolves and 4 cubs in the Tiflis zoo-park, six species of nematodes, five of cestodes, and *Alaria alata*, giving the percentage incidence in each case. The cubs harboured only hookworms and ascarids, the presence of mature *Toxocara canis* in a cub of three weeks suggesting prenatal infection. B.G.P.

(581b) Lewaschow records the occurrence of galls caused by the root-knot nematode, *Heterodera marioni*, on the roots of certain cultivated and wild plants in the region of the Black Sea coast of Caucasia and discusses the necessity of such measures as quarantine and the organisation of agricultural and biological personnel to prevent the spread of the parasite to other areas where tobacco and ethereal oil crops are grown.

T.G.

(581c) Gurwitsch summarizes methods of preventing the spread of *Heterodera schachtii* and *H. marioni* and methods of control which may be adopted in infected areas. Surveys of areas not yet known to be infected combined with quarantine measures are recommended. Fallowing, crop rotation, chemical and steam treatments of soil are considered in relation to control.

M.J.T.

582—Maroc Médical.

- a. MARTIN & ARNAUD.—“Epidémiologie de la ‘maladie hydatique’ au Maroc. Première partie. L’échinococcose humaine.” xv (1958), 307-311. [1935.]
- b. VELU, H. & SARTHOU.—“Epidémiologie de la ‘maladie hydatique’ au Maroc. Deuxième partie. L’échinococcose du bétail au Maroc.” xv (1958), 312-318. [1935.]

(582a) Martin & Arnaud have investigated the epidemiology of echinococcosis in Morocco and, from a statistical survey of human hospital cases, have found the disease to be comparatively rare. Women are more frequently parasitized than men and children and the areas most heavily infected correspond with those where cattle, in which sterile cysts are rare, are most frequently pastured.

J.N.O.

(582b) Velu & Sarthou, in a survey of animal echinococcosis in Morocco based on abattoir statistics, find that heavy infestation of sheep and cattle is confined to areas which have a high rainfall and where cattle rearing is largely practised. Where cattle are scarce or absent, as in the drier regions of the South, sheep are but lightly infected. In sheep, calcification of the cyst, more especially in the liver than in the lungs, appears to be a normal process, whereas in cattle this process, particularly in the lungs, is exceptional; cattle, therefore, are considered to be much more dangerous than sheep. The authors consider the rôle of the carnivore very important in the epidemiology of echinococcosis and believe that the frequency of infection in herbivores is linked up with the infested pariah dogs which frequent the villages.

J.N.O.

583—Médecine Infantile.

- a. ROUËCHE & TERRASSE, J.—“L’helminthiase de l’enfant et son traitement.” XLII, 77-89. [1935.]

(583a) [This paper appears also in J. Méd. Paris. See above No. 564a.]

584—Medical Press and Circular.

- a. DEW, H. R.—“Hydatid disease—a general survey.” CXC1 (5022), 104-110. [1935.]

(584a) [This paper appears also in Vet. J. See below No. 683a.]

585—Medical Record.

- a. RAGANY, J.—“Silver salvarsan in the treatment of trichinosis.” CXLII (7), p. 335. [1935.]

(585a) Ragany has treated seven cases of trichinosis successfully with silver salvarsan. The subjects were adults and children, and in each case marked eosinophilia was present. Six to ten intravenous injections of silver salvarsan were given to each patient, reaching a total of ten grammes in the adults. Drowsiness followed the first three injections, but after this a marked improvement was evident, except in one patient who had developed polyneuritis. This case responded to treatment after the sixth injection. K.S.

586—Medicina Ibera.

- a. CALVO MELENDRO, J.—“Indicaciones del neumotórax artificial en el tratamiento de la equinocosis pulmonar.” Año XIX, II (927), 198-202. [1935.]

587—Medicina del Lavoro.

- a. VERNETTI BLINA, L.—“Il ricambio emoglobinico nella anemia da anchilostoma.” XXVI (9), 337-338. [1935.]
- b. VERNETTI BLINA, L.—“Le modificazioni della massa sanguigna circolante nella anchilostomiasi.” XXVI (9), 338-340. [1935.]

588—Medicina de los Países Cálidos.

- a. KOURÍ, P. & VALVERDE, A.—“Nuevo caso cubano de fasciolosis hepática humana. Curación por la emetina. Estado actual de la emetinoterapia en esta parasitosis.” VIII (10), 457-468. [French summary p. 468.] [1935.]
- b. DARRIBA, A. R.—“Oncocercosis americana.” VIII (12), 561-573. [1935.]

(588b) Darriba gives a condensed account of human onchocerciasis in Mexico and Guatemala, touching briefly upon the historical aspect and dealing successively with the incidence and location of the nodules, coastal erysipelas (which, according to Strong, may be due to a streptococcal infection secondary to the slight skin inflammation caused by the microfilariae), ocular lesions, transmission, treatment and prevention. Nodules should always be extirpated, if only as a prophylactic measure. Measures aimed at destroying *Simulium* or preventing its biting, are not very practicable at present.

B.G.P.

589—Medizinische Welt.

- a. SCHÄFER, W. & LODENKÄMPER, H.—“Ein zwanzigjähriges Darmleiden, hervorgerufen durch *Strongyloides intestinalis*.” IX (35), 1241-1244. [1935.]

(589a) Schäfer & Lodenkämper describe and figure the free living stages of *Strongyloides stercoralis*, the pathological changes induced by the parasitic female and suggest methods of treatment. They discuss the toxic responses of the infective larva and the bearing of them on its powers of penetration of the human skin. They further discuss the importance of the lung stages and compare and contrast these stages with those of *Ascaris* and *Ancylostoma*.

P.A.C.

590—Memoirs of the Faculty of Science and Agriculture. Taihoku.

- a. HARADA, I.—“Zur Acanthocephalenfauna von Japan.” XIV (2), 7-23. [1935.]

(590a) In this paper Harada describes 8 genera and 9 species of Acanthocephala of Japan, of which 2 genera and 5 species are new. The hosts are salt water and fresh water fish, amphibia, reptiles and mammals. Harada makes the following new records: (i) *Micracanthorhynchus* n. g., a parasite of fresh water fish. Harada puts this in the family Rhadinorhynchidae. (ii) *M. motomurai* n. sp. from the intestine of *Zacco* sp., Korea. (iii) *Rhadinorhynchus trachuri* n. sp., from the intestine of *Trachurus japonicus*. *R. selkerki* (Van Cleave 1921) is very imperfectly described and although the hooks on the proboscis are similar their dimensions do not agree. (iv) *Corynosoma ambispinigerum* n. sp. from the small intestine of *Phoca* sp. in the North Pacific (Japan). Harada differentiates between *C. strumosum* and this n. sp. which is synonymous with *C. osmeri* Fujita. Fujita's description is emended and supplemented. (v) *Bolbosoma thunni* n. sp. is described from the intestine of *Thunnus thynnus*, Japanese sea waters. Harada considers *Acanthocephalus lucidus* Van Cleave 1925, to be a synonym of *A. artatus* Van Cleave 1925. He considers the following to be synonyms of *A. echigoensis* Fujita 1920: *A. oncorhynchi* Fujita 1921, *A. aculeatus* Van Cleave 1931 and *A. acerbus* Van Cleave 1931. (vi) *Spirorhynchus alemniscus* n. g., n. sp., parasitic in the intestine of the Formosan sea fishes *Scatophagus argus* and *Lutianus russelli*, is placed in *Spirorhynchidae* n. fam. *Macracanthorhynchus hirudinaceus* Pallas 1781 is recorded from *Sus scrofa domesticus* in Formosa.

A.E.F.

591—Memorias de la Sociedad Cubana de Historia Natural “Felipe Poey.”

- a. PÉREZ VIGUERAS, I.—“*Tristomum poeyi* n. sp. (Trematoda), parasito de *Makaira ampla* Poey (Pisces).” IX (1), 43-44. [1935.]
- b. PÉREZ VIGUERAS, I.—“Notas sobre la fauna parasitologica de Cuba.” IX (1), 45-49. [1935.]
- c. PÉREZ VIGUERAS, I.—“*Torrestrongylus torrei* n. gen. n. sp. parasito de Chiroptera.” IX (2), 57-58. [1935.]
- d. PÉREZ VIGUERAS, I.—“Notas sobre la fauna parasitologica de Cuba.” IX (2), 59-66. [1935.]
- e. KOURÍ, P. & FRADE, A. DEL.—“La clonorchiasis en la Ciudad de la Habana.” IX (2), 77-88. [1935.]

(591b) Pérez Vigueras presents the first part of a check-list of parasites found in Cuba, consisting of a species of Turbellaria recorded by Hoepli from human urine, and 12 species of trematodes.

B.G.P.

(591d) Pérez Vigueras continues his check-list [see previous abstract] with a list of 30 species of cestodes.

B.G.P.

(591e) Of 100 natives of Canton, resident in Havana, 49 carried *Clonorchis sinensis*. Immigration of such carriers however is not likely to set up a focus of clonorchiasis in Cuba as the necessary intermediate hosts are absent.

P.A.C.

592—Monatsschrift für Kinderheilkunde.

- a. BRÜNING, H.—“Eingeweidewürmer bei Kindern.” LXIV (2/3), 232-240. [1935.]

593—Morgagni.

- a. MASI, G. DE.—“Il glutathione del sangue nelle parassitosi intestinali.” LXXVII (50), 1318-1322. [1935.]

(593a) In twelve anaemia cases, all infected with parasites, De Masi has determined the glutathione of the blood (Gabbe technique) and also a ratio, which he states as “Glutathione/Red cells.” His results [not given] are said to show that in five hookworm cases the total glutathione was normal while the ratio, which is normally 0.59, was increased to 1.0 or above. The remaining cases, parasitized by other helminths and by protozoa, showed the total glutathione decreased and the ratio normal or decreased. He contrasts the hookworm-anaemia results with those obtained in tubercular and other secondary anaemias. B.G.P.

594—National Institute of Health Bulletin. United States Public Health Service.

- a. STILES, C. W. & BAKER, C. E.—“Key-catalogue of parasites reported for Carnivora (cats, dogs, bears, etc.) with their possible public health importance.” No. 163, pp. 913-1223. [1935.]

595—Nederlandsch-Indische Bladen voor Diergeneeskunde en Dierenteelt.

- a. KRANEVELD, F. C.—“Stephanofilariosis. VII. Een door de *Stephanofilaria dedoesi* veroorzaakte ooraandoening bij buffels. (Voorloopige mededeeling).” XLVII (6), 310-316. [In Dutch: English and German summaries p. 316.] [1935.]

(595a) A dermatitis affecting the ears of buffalo in Sumbawa and Celebes (Dutch East Indies) is reported by Kraneveld as due to local infection with *Stephanofilaria dedoesi*. The dermatitis takes the form of papules, and occasionally of encrustations, and is restricted to the ears—in contrast to the more generalized skin lesions (“cascado”) caused by this parasite in the ox and the goat. Six photographs of affected ears are appended. B.G.P.

596—New Zealand Medical Journal.

- a. BARNETT, L.—“A department for hydatid disease research and prevention.” XXXIV (182), 258-260. [1935.]

597—North American Veterinarian.

- a. MORRIS, M. L., DINKEL, J. H. & GREEN, D. F.—“A comparative study of the drop method and concentration method for the diagnosis of *Dirofilaria immitis*, canine heart-worm.” XVI (11), 39-40. [1935.]
- b. KRULL, W. H.—“Experiments with *Fascioloides magna* involving the final host.” XVI (12), 26-28. [1935.]

(597a) The fresh smear method of determining the presence of *Dirofilaria immitis* embryos in the blood is shown to give an error of 50% as compared with centrifuging. R.T.L.

(597b) Krull has shown by feeding experiments with cercariae that *Fascioloides magna* is lethal to rabbits but does not reach maturity. In

cattle maturity occurred but eggs were not passed by these hosts. The flukes developed normally in sheep, and eggs were passed about 5 months after experimental infection.

J.W.G.L.

598—Nuovo Ercolani.

- a. GARZIA, G.—“Un caso di distomatosi epatica da *Distomum magnum* (Bassi 1875) nel bovino.” XL (3), 126-132. [1935.]

599—Ohio Journal of Science.

- a. ANDERSON, M. G.—“Some intestinal parasites of *Natrix sipedon* Linn., with notes on the identity of *Ophiotaenia* (*Taenia*) *lactea* Leidy with *Ophiotaenia perspicua* LaRue.” XXV (2), 78-80. [1935.]

(599a) Anderson reports for the first time from *Natrix sipedon* the cestode *Ophiotaenia perspicua*, which is probably *Taenia lactea* of Leidy, and an Acanthocephalan *Leptorhynchoides thecatus*, acquired accidentally through the eating of infected fish. A single male nematode was found, of the genus *Camallanus*, but the species could not be determined.

E.M.S.

600—Onderstepoort Journal of Veterinary Science and Animal Industry.

- a. MÖNNIG, H. O.—“The chemotherapy of oesophagostomiasis in sheep. II.” v (2), 419-438. [1935.]
- b. MÖNNIG, H. O. & QUIN, J. I.—“Studies on the alimentary tract of the Merino sheep in South Africa, II. Investigations on the physiology of deglutition, II.” v (2), 485-499. [1935.]

(600a) Mönnig has carried out large scale tests on relatively insoluble drugs concurrently with a series of investigations on the physiology of deglutition in sheep. He finds that a mixture of copper arsenate, calcium hydroxide and copper tartrate appears to be an effective remedy against oesophagostomiasis if administered directly into the abomasum. This he achieves by stimulation of the oesophageal reflex with a 10% solution of copper sulphate and by giving a double dose of the mixture. Full directions for dosing are appended.

K.S.

(600b) Mönnig & Quin recommend a solution of copper sulphate for the stimulation of reflex closure of the oesophageal groove in sheep. Under favourable conditions a 0.25% copper sulphate solution will produce this stimulus, but a 10% solution is necessary to overcome the counteracting effects of age, poor condition and dryness of the ruminal contents. The authors find that preliminary starvation is unnecessary and that the method of administration is unimportant. The reflex is established immediately the stimulant touches the mucosa of the pharynx and closure of the groove is maintained for at least 15 seconds. Small pills may be swallowed into the abomasum after stimulation but capsules are not. As the abomasal mucosa is very tender, care must be exercised in administering concentrated drugs in this way. Experiments have been started to find the time taken by drugs administered into the abomasum to pass through the intestines. These indicate that the drug may reach the colon in about five hours and be passed in the faeces from the 15th hour.

K.S.

601—Orvosi Hetilap.

- a. SZABÓ, K.—“Az ascaris ileusról.” LXXIX (47), 1243-1244. [1935.]

602—Pamiętnik (XIV) Zjazdu Lekarzy i Przyrodników Polskich w Poznaniu. 1933.

- a. EJSMONT, L.—“Zależność pomiędzy lokalizacją *Dioctophyme renale* a drogami rozwojowymi w żywicielu.” 1933, I, 861-865. [1935.]

(602a) This is a Polish abstract of a paper read by Ejsmont at the 14th Congress of the Polish Medical Specialists and Scientists held at Poznan. The paper is published in full in *Roczniki prac Naukowych Zrzeszenia Asystentów Uniwersytetu Józefa Piłsudskiego w Warszawie*, I (2), 473-485 [see Helm. Abs., Vol. V, Pt. 5].

B.G.P.

603—Papers of the Michigan Academy of Science, Arts and Letters.

- a. KRULL, W. H.—“Studies on the life history of a frog bladder fluke, *Gorgodera amplicava* Looss, 1899.” XX, 697-710. [1935.]

(603a) Krull describes the experiments whereby he has established the life-history of *Gorgodera amplicava*. The first and second intermediate hosts are a bivalve, *Musculium partumeium*, and a snail, *Helisoma antrosa*, respectively. The final host may be either *Rana clamitans* or *R. catesbeiana*. The life cycle is unique among known frog bladder flukes in that a snail instead of an insect serves as second intermediate host.

E.M.S.

604—Pediatria Española.

- a. SUÁREZ, M.—“Neumotórax espontáneo.” Año XXIV (274), 249-257. [1935.]

605—Pediatria del Medico Pratico.

- a. LATTES, E.—“Ricerche sulla frequenza di elminti intestinali nell'infanzia.” X, 362-371. [1935.]
 b. MALAVASI, W.—“L'elmintiasi nell'infanzia e suoi possibili errori diagnostici.” X, 495-509. [1935.]
 c. EGIDI, E.—“Su di un caso di cisti da echinococco del fegato e del polmone.” X, 548-552. [1935.]

606—Peking Natural History Bulletin.

- a. HU, S. M. K.—“Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Wuchereria bancrofti* Cobbold. III. *Culex tritaeniorhynchus* Giles.” X (1), 39-43. [1935.]
 b. HU, S. M. K.—“Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Wuchereria bancrofti* Cobbold. IV. *Aedes vexans* var. *nipponii* Theobald.” X (2), 127-131. [1935.]
 c. HSÜ, Y. C.—“Trematodes of fowls in Soochow.” X (2), 141-150. [1935.]

(606a) Of 181 *Culex tritaeniorhynchus* experimentally fed on a heavy *F. bancrofti* case, 97 were found by Hu to be infected after 10 days, but in only four of these was development completed.

B.G.P.

(606b) Of 195 *Aedes vexans* fed with *Wuchereria bancrofti*, 140 were later found to contain only dead larvae. They were of a microfilarial form

and had undergone chitinous encapsulation. After penetrating the body cavity of the mosquito, they had apparently undergone no further development.

P.A.C.

(606c) Hsü has collected 8 species of flukes from chickens, ducks and geese in Soochow, including *Opisthorchis anatis*, *Prosthogonimus japonicus* and *Echinostoma revolutum*. Five new species are described. *Prosthogonimus lei* n. sp. occurs in the egg albumen of ducks and is characterized by a very short oesophagus. *Echinostoma minor* n. sp. was recovered from the intestine of a chicken, and had elliptical testes, showing no lobulation. *E. elongata* n. sp. from ducks had large testes occupying the greater part of the middle of the body. The uterus is extremely short. *Hypoderaeum sinensis* n. sp., parasitic in ducks and chickens, has a much reduced head crown and a small convoluted ovary. *Paramonostomum ovatus* n. sp. (Notocotylidae) occurred in the caecum of ducks. The pharynx and prepharynx are both absent in this species. It closely resembles *P. elongatum* but differs in the extent of the cirrus sac and vitellaria.

P.A.C.

607—Pharmaceutical Journal.

- a. CAWSTON, F. G.—“Tartar emetic and sodium antimonyltartrate.” [Correspondence.] CXXXV (3749), p. 260. [1935.]

608—Philippine Journal of Science.

- a. JESUS, Z. DE.—“*Lymnaea philippinensis*, an intermediate host of *Fasciola hepatica* in the Philippines, with some observations on the bionomics of the parasite.” LVIII (3), 299-314. [1935.]
- b. TUBANGUI, M. A. & MASILUNGAN, V. A.—“Trematode parasites of Philippine vertebrates, VII. Additional records of new species.” LVIII (4), 435-444. [1935.]
- c. TUBANGUI, M. A., BASACA, M., PASCO, A. M. & ROSARIO, F. DEL.—“Observations on the geographical distribution of hookworm parasites and hookworm disease in the Philippines.” LVIII (4), 447-468. [1935.]

(608a) *Limnaea philippinensis* which is widely distributed in the Philippine Islands has been shown experimentally to be the intermediate host of *Fasciola hepatica*. The prevailing temperature throughout the year in these islands is favourable to the hatching of the fluke eggs. The life cycle is completed in the mollusc in from 35 to 48 days in the laboratory and in from 44 to 48 days in the field. The free-swimming cercariae are not infective. In a goat experimentally infected mature flukes which had not attained to egg production were found 110 days after infection.

R.T.L.

(608b) Systematic descriptions are given of *Opisthorchis ophidiarum* n. sp. in the watersnake, *Lapemis hardwickii*, *Echinostoma charadrii* n. sp. in *Pluvialis fulvus*, *Pegosomum bubulcum* n. sp. in the liver of *Bubulcus coromandus*, *Paradistomum excalotes* n. sp. in the gall bladder of *Calotes calotes marmoratus*, *Euclinostomum multicaecum* n. sp. encysted in muscles of *Ophicephalus striatus*, *Ectenurus lemeriensis* n. sp. in a leather jacket (*Scomberoides* sp.).

R.T.L.

(608c) A quantitative survey of hookworm incidence in several widely separated places in the Philippine Islands by Tubangui and his co-workers shows that the significance of the infection has been under-estimated by previous observers. Hookworm disease was invariably met with in individuals

having over 10,000 eggs per c.c. of faeces. Variations in incidence are not due to differences in habits of the people but to climatic and other environmental factors that influence the temperature and moisture of the soil.

R.T.L.

609—Plant Disease Reporter. Supplement.

- a. EDSON, H. A., MILLER, P. R. & WOOD, J. I.—“Diseases of plants in the United States in 1934.” No. 90, 135 pp. [1935.]

(609a) Edson, Miller & Wood in a list of plant diseases observed in U.S.A. during 1934 include several reports of affections due to the following parasitic nematodes :—*Anguillulina dipsaci* attacking ox-eye daisy, narcissus, soybean, *Trifolium arvense* and *T. repens* ; *A. pratensis* on potato ; *A. tritici* on wheat ; *Aphelenchoides fragariae* on begonia, chrysanthemum, *Ligustrum*, strawberry and Takasago lily ; *Heterodera marioni* on Antirrhinum, apple, bean, beet, carrot, celery, cotton, cowpea, *Gardenia*, onion, paeony, pepper, potato, rose, sweet potato, tobacco, tomato and *Weigelia* ; *H. schachtii* on sugar beet.

T.G.

610—Poultry Science.

- a. BLEECKER, W. L. & SMITH, R. M.—“The influence of vermifuge treatment of laying hens under field conditions.” [Abstract of a paper presented at the 27th Annual Meeting of the Poultry Science Association.] XIV (5), p. 313. [1935.]

(610a) Bleecker & Smith find that the efficiency of commercial vermifuges for hens varies considerably and recommend that the birds should be treated individually when young before being put on free range and later before they come in to lay.

P.A.C.

611—Prager Tierärztliches Archiv.

- a. KOHN, F. G.—“Parasitologische Beiträge.” XV (5), 107-114. [1935.]

(611a) Kohn reports on (i) a mixed infection of coccidia and a species of *Strongyloides* in a goat, and on (ii) a number of miscellaneous helminths and other parasites found in mammals and fish in the Karlsbad region.

B.G.P.

612—Presse Médicale.

- a. MOIROUD, P. & LUNA, C. DE.—“De la valeur du tubage duodénal pour le diagnostic de kyste hydatique du foie ouvert dans les voies biliaires.” XLIII (82), p. 1580. [1935.]

613—Proceedings of the Academy of Sciences (United Provinces of Agra and Oudh, India).

- a. PANDE, B. P.—“Contributions to the digenetic trematodes of the Microchiroptera [Microchiroptera] of Northern India. Part III. New distomes of the genus *Mesodendrium* Faust (1919).” V (2), 243-249. [1935.]

(613a) Pande discusses the characters and species of the genera *Lecithodendrium* and *Mesodendrium*, and describes *M. mödingeri* n. sp. and *M. elongatum* n. sp. from *Nycticejus kuhli* and *Vesperugo abramus*, respectively. In an addendum he allocates a new trematode reported by Thapar as of the *Dicrocoeliidae*, to the genus *Anchitrema*.

E.M.S.

614—Proceedings of the Imperial Academy (of Japan).

- a. TANIGUCHI, R.—“Notes on the movement of the soil nema, *Rhabditis filiformis* Bütschli.” XI (2), 77-79. [1935.]
- b. OZAKI, Y.—“Two new trematodes of the family Opistholebetidae Travassos. (Preliminary note.)” XI (6), 244-246. [1935.]

(614a) Taniguchi has carried out observations on the behaviour of *Rhabditis filiformis* Bütschli. When placed in a ring of water on a glass slide or in water on blotting paper or silk material or in a vessel with vertical sides males and females bore outwards against the limiting surface with the body maintained perpendicular to the surface. This is looked upon as evidence of a thigmotactic response. Experiments were also carried out in capillary tubes to determine the effect of temperature on relative velocity and the conclusion is reached that between 14°-27°C. for the male and 16°-26°C. for the female, the relation of velocity to temperature is in harmony with the Van't Hoff-Arrhenius law, i.e., the higher the temperature, within the limits indicated, the greater the velocity of movement. T.G.

(614b) Two new amphistomoid fish trematodes are reported from the intestine of *Diodon holacanthus* Linn., viz., *Opistholebes cotylophorus* and *Heterolebes maculosus* n. g., n. sp. The generic characters are not indicated. R.T.L.

615—Proceedings of the Indian Academy of Sciences. Section B.

- a. FROILANO DE MELLO, I.—“A contribution to the study of the blood parasites of some Indian birds.” I (7), 349-358. [1935.]
- b. VERMA, S. C.—“Studies on the Indian species of the genus *Echinochasmus*, Part I, and on an allied new genus *Episthochasmus*.” I (12), 837-856. [1935.]
- c. LAL, M. B.—“On the morphology of a new species of Monostome of the genus *Notocotylus* Diesing, 1839.” II (5), 419-423. [1935.]
- d. LAL, M. B.—“A review of the genus, *Notocotylus*, with description of a new trematode parasite of *Mareca penelope* from Lucknow.” II (5), 457-466. [1935.]
- e. MIRZA, M. B. & NARAYAN, S. S.—“*Strongyloides akbari* n. sp. A new nematode parasite from *Crocidura coerulea*, with a note on some species of the genus *Strongyloides*.” II (6), 503-507. [1935.]

(615a) Microfilariae occur in the blood of the birds *Herodias intermedius* and *Chloropsis aurifrons davidsoni* at Goa. R.T.L.

(615b) Verma describes two new species of *Echinochasmus*, *E. bagulai* and *E. ruficapensis* n. spp., from Indian birds. He also describes *Episthochasmus caninum* n. g., n. sp. a common parasite of Calcutta street dogs. These forms all possess a peculiar chambered excretory bladder which may offer a natural basis of classification of the echinostomes. E.M.S.

(615c) Lal describes *Notocotylus indicus* n. sp. from the intestinal caeca of *Mareca penelope*, Lucknow. The genital pore is posterior to the acetabulum. E.M.S.

(615d) Lal maintains that the number of the ventral glands can be used as a diagnostic character in *Notocotylus*. He subdivides the genus, on the basis of the position of the genital pore, into three new genera, characterised as follows: *Notocotylus sens. str.*, genital pore behind the intestinal fork, type, *N. attenuatus*; *Hindia* n. g., genital pore at the intestinal

fork, type *N. gibbus*; and *Naviformia* n. g., genital pore anterior to intestinal fork, type *N. naviformes*. *Hindia lucknowensis* n. sp. is described from *Mareca penelope*. E.M.S.

(615e) *Strongyloides papillosus* Wedl, 1856 is recorded as common in *Lepus ruficaudatus* in the Aligarh District of India. *S. akbari* n. sp. from the small intestine of the musk-rat, *Crocidura coerulea*, and *S. stercoralis* var. *eryxi* n. var. from *Eryx johnii* and *S. stercoralis* var. *vulpi* n. var. from *Vulpex alopes* are new varieties. R.T.L.

616—Proceedings of the Royal Academy of Sciences, Amsterdam.

- a. KRÜGER, F.—“Beiträge zur Kenntnis der Sauerstoffatmung von *Ascaris suilla*.” XXXVIII (1), 101-104. [1935.]

(616a) Krüger gives a critical review of work carried out up to 1934, on the subject of the respiration of *Ascaris suilla*. He deals with the changes in value of the respiratory quotient under varying conditions of environment and time, and discusses the effect of anaerobic metabolic processes on the values observed. R.H.H.

617—Proceedings of the Zoological Society of London.

- a. WOODLAND, W. N. F.—“Additional cestodes from the Amazon siluroids Pirará, Dorád, and Sudobim.” 1934, Part 4, pp. 851-862. [1935.]
- b. REES, W. J.—“The anatomy of *Cercaria buccini* Lebour, 1911.” 1935, Part 2, pp. 309-312. [1935.]

(617a) Woodland describes *Myzophorus pirará* n. sp., *M. dorád* n. sp., *M. sudobim* n. sp., *Monticellia spinulifera* n. sp. and *Nomimoscolex sudobim* n. sp. The status of the genus *Myzophorus* is discussed, and a list is appended of all cestodes so far reported from Amazon fishes. E.M.S.

618—Profilassi.

- a. CIARROCCI, E.—“Echinococcosi viscerale diffusa primitiva a tipo miliare in alcuni suini.” VIII (3), 97-104. [English summary p. 104.] [1935.]
- b. FIORINI, M.—“Sull'intradermo e intrapalpebro-reazione nella diagnosi di echinococcosi sperimentale” VIII (5), 179-184. [1935.]

(618b) Having sensitized guinea pigs with hydatid fluid from either swine or cattle, Fiorini obtained positive results from both intradermal and intrapalpebral reactions. The results were positive whether the origin of the hydatid fluid used for sensitization was the same as or different from that used for the local reaction. P.A.C.

619—Progrès Médical.

- a. COICOU, F.—“Eléphantiasis et lymphangites en Haiti.” 1935, No. 11, pp. 441-445. [1935.]

620—Progresos de la Clínica.

- a. SUÑER, E. & LARREGLA, S.—“Valor de las pruebas de laboratorio en el diagnóstico de los quistes hidatídicos.” XLIII, 581-584. [1935.]

621—Progress Notes, Animal Husbandry Division, Hawaii Agricultural Experiment Station.

- a. HALL, M. C.—“The liver fluke problem in Hawaii.” No. 12, 18 pp. [1935.]

622—Przegląd Weterynaryjny.

- a. CENA, M. R.—“Przyczynek do rozpoznawania włosnicy y świń zapomocą odczynu strącania.” XLVIII (5), 302-313. [1935.]
- b. TRAWIŃSKI, A.—“Przypadek wągryczy w mózgu człowieka.” XLVIII (6), 389-391. [1935.]
- c. KASPRZAK, Z.—“Przyczynek do wrażliwości włosńi nieotorbionych w mięsie peklowanem na działanie solanki.” XLVIII (9), 552-568. [1935.]

(622a) Using Trawiński's antigen, Cena shows the precipitation reaction to be specific in the diagnosis of trichinosis in swine. Positive diagnosis could be obtained as early as the 11th day after infestation. Such results are superior to those obtained with Bachman's antigen as this sometimes gives a positive result in animals free from trichinosis. P.A.C.

(622b) [Case of human cerebral cysticerciasis.]

(622c) In examining the effect of brine on the unencysted larvae in trichinous meat, Kasprzak finds that all such larvae are killed if the concentration of the brine exceeds 9.5%. Larvae can withstand the action of more dilute brine for a very long time without ill effects. P.A.C.

623—Queensland Agricultural Journal.

- a. ROBERTS, F. H. S.—“Our present knowledge of the association of insects with disease.” XLIV (4), 409-416. [1935.]

(623a) Roberts gives a résumé of our present knowledge of the association of insects with organisms producing diseases of virus, protozoal, bacterial and helminthic origin. Insect-borne diseases of unknown origin and diseases directly attributable to insects are also mentioned. The vectors and mechanical carriers of the more important trematodes, cestodes and nematodes of man, domestic animals and poultry are given. J.N.O.

624—Records of the Indian Museum.

- a. DATTA, M. N. & PODDAR, T. N.—“Acanthocephalan parasites of certain fishes from Calcutta.” XXXVII (2), 231-236. [1935.]
- b. MAPLESTONE, P. A.—“The nematode genus *Deletrocephalus* Diesing, 1851.” XXXVII (3), 335-336. [1935.]
- c. GOGATE, B. S.—“On trematode parasites from *Ptyas korros* (Schlegel 1837) and *P. mucosus* (Linnaeus 1758) from Rangoon.” XXXVII (4), 455-458. [1935.]

(624a) Acanthocephalan parasites are frequently found in fishes sold in the Calcutta markets. Descriptions are given of *Acanthogyryus acanthogyryus* Thapar, 1927 from *Labeo rohita* and *Catla catla*, and of *Pallisentis nagpurensis* (Bhalerao, 1931) from *Ophicephalus striatus*. R.T.L.

(624b) Maplestone agrees with Travassos (1933) that *Quasistrongylus rheae* Maplestone, 1932 is synonymous with *Deletrocephalus dimidiatus*

Diesing, 1851, but points out that this genus can be included in the subfamily Strongylinae Railliet, 1893 and that Travassos' revival of Railliet's subfamily Deletrocephalinae is unnecessary. A detailed definition of *Deletrocephalus* is given. R.T.L.

(624c) *Ostiolum mehrai* n. sp. is described and illustrated from the snakes *Ptyas korros* and *P. mucosus* in Rangoon. *Ommatobrephus lobatum* Mehra 1928 is also recorded from *P. mucosus*, and *O. folium* Thapar and Ali 1929 is shown to be its synonym. R.T.L.

625—Recueil de Médecine Vétérinaire.

- a. CARPENTIER, G.—“Le diagnostic par la microscopie fécale, en clientèle et au régiment.” CXI, 723-758. [1935.]

(625a) Carpentier commends to the veterinary practitioner the microscopic examination of faeces as an aid to diagnosis. He briefly outlines sedimentation and flotation methods, and describes seriatim the commoner helminth eggs and larvae and protozoal cysts of the horse, sheep and cattle, dog and cat, and (more briefly) pig, rabbit and poultry. B.G.P.

626—Report of the Cheltenham College Natural History Society for the year 1934.

- a. TAYLOR, J. N.—“Nematode worms parasitic on the yellow ant (*Acanthamyops flavus* F.)” pp. 27-28. [1935.]

(626a) Taylor records parasitism of the males of the Yellow Ant (*Acanthamyops flavus* F.) by *Mermis myrmecophila*. Parasitized insects differ from normal males only by a slight distension of the abdomen and do not show the short-winged condition of mermithogynes. J.N.O.

627—Report (4th) of the Director of the Institute of Animal Pathology. Cambridge.

- a. LAPAGE, G.—“The effects of some natural factors on the second ecdysis of nematode infective larvae.” pp. 280-304. [1935.]

(627a) Continuing his observations on the factors which influence the second ecdysis of infective trichostrongylid larvae, Lapage indicates that the pH of their environment and the age of the larvae are interlinked. Acids cannot alone cause ecdysis but they may alter the permeability of the sheath in such a way that the osmotic process previously described by the author [see Helm. Abs., Vol. IV, Nos. 127e, 127f, 155e] can bring about ecdysis. Also, comparatively great and sudden temperature changes cannot alone cause ecdysis but they influence it indirectly by their effects on the activity of the larvae and on the acid-base equilibrium of the environment. A minimum of alkali seems necessary for exsheathment and the older the larvae the less alkali is required; thus older larvae will ecdyse even in feebly alkaline media such as tap water. Exsheathment observed in media containing saliva, pepsin, trypsin, rennin, etc., was due, not to these ferments, but to the inorganic salts present and it is argued that, within the host, the second ecdysis may be assisted, hindered or prevented by variations in the pH and salt content of those regions of the alimentary tract where this ecdysis

normally occurs ; and that the immunity or resistance of hosts to nematode infections may be determined by such local factors. Under natural conditions friction and mechanical damage can only effect the second ecdysis of larvae whose sheaths have already been altered by the above-mentioned factors, which would alone be sufficient to cause exsheathment. There is no evidence that friction and damage are essential for ecdysis, even in older larvae whose sheaths normally become brittle, or that the so-called boring movements of non-skin-penetrating larvae play an important part in the production of exsheathment.

J.N.O.

628—Report. National Research Council of the Philippine Islands for 1935.

- a. TUBANGUI, M.—“ Medical and veterinary parasitology in the Philippines : solved and unsolved problems.” pp. 486-491. [1935.]

629—Reports (25th-26th) of the Quebec Society for the Protection of Plants.

- a. CAMERON, T. W. M.—“ Nematodes and plants.” [Reprint 10 pp.]

630—Résultats des Campagnes Scientifiques Accomplies par le Prince Albert I. Monaco.

- a. GUIART, J.—“ Cestodes parasites provenant des campagnes scientifiques de S.A.S. le Prince Albert Ier de Monaco (1886-1913).” xci (5), 1-101. [1935.]

(630a) In this monograph of cestodes collected from marine mammals, birds and fishes, 51 species are described of which a number are new and several are larval forms. From *Delphis delphis*, Guiart records as new *Prostheocotyla diplosoma* n. sp. and *P. pachysoma* n. sp. ; and from *Phoca* sp., *Plerocercoides portieri* n. sp. The others occur in various fishes.

R.T.L.

631—Revista de Biologia e Hygiene. São Paulo.

- a. VAZ, Z.—“ Redescricao de *Arthrocephalus maxillaris* (Molin, 1860) necatorineo parasita de *Procyon cancrivorus*.” vi (1), 9-12. [1935.]
- b. PEREIRA, C.—“ Sobre um Lepidonemidae Trav., 1919 e um Rhabdiasidae Railliet [Railliet] 1915 (Nematoda) novos.” vi (1), 19-21. [1935.]

(631a) Vaz identifies material obtained from the intestine of *Procyon cancrivorus* with *Dochmius maxillaris* Molin, 1860. The species is redescribed and placed in the genus *Arthrocephalus*.

D.O.M.

(631b) Pereira describes and figures two new species of nematode obtained from Brazilian animals : *Severianoia magna* n. sp., an oxyurid from the intestine of an undetermined species of wild Blattidae and *Strongyloides carini* n. sp., from the small intestine of the batrachian, *Leptodactylus gracilis*.

T.G.

632—Revista de Chirurgie. București.

- a. POP, A., MURESAN, E. & NANA, A.—“ Diagnosis and therapy of pulmonary hydatid cyst.” xxxviii, 1-12. [1935.]
- b. IACOVLESIC.—“ Lobectomie dans un seul temps en plèvre libre pour échinococcose et abcès putride du lobe inférieur.” xxxviii, 134-136. [1935.]

633—Revista do Departamento Nacional da Produção Animal.

- a. OLIVEIRA CASTRO, G. M. DE.—“Notas sobre technica parasitologica.” II (1/3), 131-136. [English summary p. 135.] [1935.]
- b. ALMEIDA, J. LINS DE.—“Notas helminthologicas. I.” II (1/3), 137-138. [1935.]
- c. FREITAS, J. F. TEIXEIRA DE & ALMEIDA, J. LINS DE.—“Sobre um novo nematodeo parasito de ave domestica *Capillaria cairinae* n. sp.” II (1/3), 139-141. [English summary p. 141.]

(633a) Oliveira Castro finds that a useful clearing agent for nematodes is made up from absolute alcohol 60 c.c., water 60 c.c. and sufficient phenol to give a refractive index of 1.453 (at 25°C.), i.e., bringing the solution up to about 245 c.c. This is much more rapid than glycerine and gives rise to no distortion, and specimens can be transferred directly to it from alcohol, and back.

B.G.P.

(633b) Almeida reduces *Quasistrongylus rheae* Maplestone, 1932 to the synonymy of *Deletrocephalus dimidiatus* Diesing, 1851, and *Homoscaphis* Canavan, 1933 to the synonymy of *Odhneriotrema* Travassos, 1928.

B.G.P.

634—Revista Española de Cirugía.

- a. MATA, R. DE.—“Un caso de quiste hidatídico del hígado abierto en estómago.” XVII, 59-63. [1935.]

635—Revista Médica de Canarias.

- a. BOSCH MILLARÉS, J.—“Parasitología de Gran Canaria.” IV, 366-372. [1935.]

636—Revista Médica Cubana.

- a. KOURÍ, P., CALVÓ FONSECA, R. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba (provincia de Pinar del Río).” XLVI, 981-990. [1935.]
- b. KOURÍ, P., BASNUEVO, J. G. & CALVÓ FONSECA, R.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba; Provincia: La Habana. Pueblo: Guanabacoa.” XLVI, 1337-1345. [1935.]

637—Revista Médica del Rosario.

- a. IMHOFF, J. D.—“El sondaje duodenal en el diagnóstico de algunas parasitosis intestinales (triquinosis, anquilostomiasis, etc.).” XXV, 983-988. [1935.]

638—Revista Médica Veracruzana.

- a. DESCHAMPS, A.—“Un caso de apendicitis por oxiuriasis.” XV, p. 1592. [1935.]
- b. SEGOVIA, A.—“Algunas estadísticas acerca de la helmintiasis en los niños de la ciudad de Veracruz.” XV, 1695-1707. [1935.]

639—Revista de Medicina y Cirugía de la Habana.

- a. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje / distribución geográfica del parasitismo intestinal en Cuba. Provincia de Pinar del Río. Pueblo: Consolación del Sur.” XI, 519-529. [1935.]

- b. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia de La Habana, ciudad de La Habana.” *XL*, 564-572. [1935.]

640—Revista Medico-Cirurgica do Brasil.

- a. FREITAS, J. F. TEIXEIRA DE & LENT, H.—“Sobre uma nova especie do genero *Trichostrongylus* Looss, 1905.” *XLIII* (6), 180-181. [1935.]
- b. LENT, H. & FREITAS, J. F. TEIXEIRA DE.—“Contribuição ao conhecimento da fauna helminthologica da Argentina. *Graphidioides mazzai* n. sp., parasito de *Galea leucoblephara* (Burm.).” *XLIII* (7/8), 225-227. [1935.]
- c. FREITAS, J. F. TEIXEIRA DE & LENT, H.—“Quelques variations et anomalies bursaires observées chez *Viannaia viannai* Trav., 1914 et *Viannaia hamata* Trav., 1914.” *XLIII* (9), 253-258. [1935.]
- d. FREITAS, J. F. TEIXEIRA DE & LENT, H.—“Nota prévia sobre duas novas especies do genero *Capillaria* (Nematoda), e referencia a novos hospedadores de helminthos conhecidos.” *XLIII* (10), 301-303. [1935.]
- e. TRAVASSOS, L.—“Alguns novos generos e especies de *Trichostrongylidae*.” *XLIII* (11), 345-361. [1935.]

(640a) Freitas & Lent describe *Trichostrongylus nagaty* n. sp. from *Rhinchotus rufescens* in São Paulo. It closely resembles *T. pergracilis* but the spicules differ by having their distal ends recurved and drawn out to two rounded knobs. These are unequal, one being long and narrow and the other short and sturdy.

P.A.C.

(640b) Lent & Freitas describe *Graphidioides mazzai* n. sp., a parasite of *Galea leucoblephara* in Argentina. Its closest affinities lie with *G. affinis* and *G. rudicaudatus*. It differs from the former in the shape of the spicules and in the great size of the two branches of the ovejector. It is differentiated from *G. rudicaudatus* also by the shape of the spicules and gubernaculum, the dorsal ray of the bursa and the form of the ovejector.

P.A.C.

(640c) Freitas & Lent consider that the bursa of *Viannaia viannai* is a good characteristic for diagnosis in spite of considerable variation. Such variation usually occurs in the divisions of the dorsal rays, some of which are figured and described.

P.A.C.

(640d) *Capillaria linsi* n. sp. is recorded from *Galictis vittata* and *C. pereirai* n. sp. from Molossidae. New hosts are given for *Heligmostrongylus sedecimradiatus*, *Aspidodera railletii*, *Capillaria auritae*, *Skrjabinofilaria pricei* and *Brachylaemus opisthotrias*.

R.T.L.

(640e) Travassos describes 8 new genera of Trichostrongylids from Edentata. *Macieli* n. g., related to *Cooperia*, is distinguished by the presence of an accessory bursal membrane. The spicules are of a characteristic shape. *M. macieli* n. sp. is the type species. *M. chagasi* is also described. *Delicata* n. g. approximates to *Molineus* but differs in the form of the dorsal ray and of the female tail. *D. delicata* n. sp. is the type species. *D. uncinata* n. sp., *D. variabilis* n. sp., *D. similis* n. sp. and *D. cameroni* n. sp. are also described. *Moennigia* n. g., containing *M. moennigi* n. sp., has spicules which divide into 3 points distally. *Pulchrostrongylus* n. g. with *P. complexus* n. sp. is related to *Delicata* but is distinguished by the disposition of the lateral and dorsal rays. The females are monodelphous. *Dasyostrongylus* n. g. with *D. filamentosus* n. sp. is distinguished from related genera by the position of the bursal rays. *Pintonema* n. g. is a larger genus containing *P. pintoi* n. sp., *P. intrusa* n. sp., *P. pulchra* n. sp., *P. pseudopulchra* n. sp. and a number of species

transferred from other genera. Difficulty in distinguishing the females was met, as all the species were together in the same host. The males can be distinguished from *Oswaldocruzia* and *Trichohelix*, its nearest relatives, by the appearance of the bursa. *Adolpholutzia* n. g. containing only *A. lutzi* n. sp. resembles *Oswaldocruzia* and *Schulzia* but is differentiated by the position and size of the dorsal ray and by the shape of the spicules. *Paracooperia* n. g. from the stomach of ruminants is described with type species *P. serrata* transferred from the genus *Cooperia*. *Oswaldocruzia mazzai* n. sp. from *Bufo* sp., *Travassostrogylus orloffii* n. sp. and *T. tertius* n. sp. from edentates are described.

P.A.C.

641—Revista de Parasitología, Clínica y Laboratorio.

- a. KOURÍ, P. & VALVERDE, A.—“Nuevo caso cubano de Fasciolosis hepática humana. Curación por la emetina. Estado actual de la emetinoterapia en esta parasitosis.” I (1), 1-15. [1935.]
- b. VIVÓ, J.—“Existe la acidosis verminosa?” I (1), 16-21. [1935.]
- c. KOURÍ, P., BASNUEVO, J. G. & SUTTER, R.—“Sobre un caso interesante de ascaridiosis.” I (1), 32-36. [1935.]
- d. KOURÍ, P. & FRADE, A. DEL.—“La clonorchiasis en la ciudad de la Habana.” I (1), 37-52. [English summary p. 50.] [1935.]
- e. KOURÍ, P.—“Técnica para el examen de la bilis, obtenida por intubación duodenal, en el diagnóstico de certeza y en el control terapéutico de la Fasciolosis hepática.” I (1), 53-67. [1935.]
- f. PÉREZ VIGUERAS, I.—“Dos especies nuevas del género *Tetrameres* (Nemátoda).” I (2), 117-120. [1935.]
- g. KOURÍ, P., BASNUEVO, J. G. & DRAKE, T.—“Un caso más de Fasciolosis hepática humana adquirida en Cuba. Curación con el Clorhidrato de emetina.” I (2), 134-150. [1935.]
- h. PÉREZ VIGUERAS, I.—“Sobre la presencia en Cuba de *Diaschistorchis pandus* (Braun) (Trematoda) parásito de *Chelonía imbricata*.” I (2), 167-168. [1935.]
- i. CALVO FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba.” I (2), 178-187. [1935.]
- j. PÉREZ VIGUERAS, I.—“Sobre la validez de la especie *Atractis cruciata* Linstow 1902.” I (2), 188-190. [1935.]
- k. KOURÍ, P., BASNUEVO, J. G., ALVARÉ, L. & LESCANO, O.—“Técnica para el estudio de la anatomía de la *Fasciola hepática*.” I (2), 191-195. [1935.]
- l. CALVO FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba (Provincia de Pinar del Río).” I (2), 206-211. [1935.]

(641f) Pérez Vigueras describes and figures *Tetrameres microspinosa* n. sp. from *Leucophoyx thula thula* and *T. fermi* n. sp. from *Butorides virescens maculatus*, both from the Pinar del Río Province.

B.G.P.

(641j) From an examination of new material of *Atractis cruciata* Linstow, 1902 from the iguana *Cyclura macleayi*, Pérez Vigueras concludes that it is a species distinct from *A. opeatura* Leidy with which it has been identified by Railliet & Henry and Walton.

B.G.P.

642—Revista de Tuberculosis del Uruguay.

- a. PIAGGIO BLANCO, R. A. & GARCÍA CAPURRO, F.—“Quiste hidático de la cara superior del hígado desarrollado en la cavidad pleural derecha.” IV (6), 504-508. [1935.]

- b. FIERRO VIGNOLI, M.—“Consideraciones sobre la hemoptisis por quiste hidático.” IV (6), 514-519. [1935.]
- c. FILIPPINI ROSSI, E. & PASTOR, E.—“Hidatidosis pulmonar secundaria a la ruptura de un quiste hidático. Siembra broncógena; dos observaciones.” V (2), 157-163. [1935.]

643—Revue Belge des Sciences Médicales.

- a. APPELMANS, M.—“Les troubles visuels dans l'onchocercose africaine.” VII (7), 525-539. [1935.]

(643a) Appelmans recognizes three successive stages in the development of human onchocerciasis: (i) nodule formation, (ii) skin lesions, and (iii) ocular lesions, which are essentially similar in nature to those of the skin. The disease in Africa does not appear to be fundamentally different from that in America. Symptomatology and pathological anatomy are described.

B.G.P.

644—Revue Française de Pédiatrie.

- a. BELLOCQ, G. P.—“L'oxyurose chez le nourrisson.” XI (6), 785-796. [1935.]

645—Revue Médicale de la Suisse Romande.

- a. BRUMPT, E.—“Contribution à l'étude de l'action cancérogène des helminthes. Rôle du *Gongylonema neoplasticum*.” LV (2/3), 66-75. [1935.]

(645a) From a review of the literature and from personal observations on a series of experimental infections of white mice with *Gongylonema neoplasticum* Brumpt considers that these parasites can provoke a pathological effect varying with the country, age, sex, number and infected food, but he is unable to decide their relative significance. Environment appears to play the most important rôle.

R.T.L.

646—Revue de Pathologie Comparée et d'Hygiène Générale.

- a. FOVEAU DE COURMELLES,—“Comment pénétrant les ascaris chez les très jeunes chiens?” XXXV (470), 1332-1336. [1935.]

(646a) Foveau de Courmelles reports a case in which the puppies of two successive litters passed a number of ascarid worms, whereas the bitch treated at the same time gave a negative result. Various explanations of this anomalous result are considered by the author.

J.W.G.L.

647—Revue Suisse de Zoologie.

- a. HSÜ, H. F.—“Contributions à l'étude des cestodes de Chine.” XLII (4), 447-570. [1935.]
- b. DUBOIS, G.—“Étude des strigéidés de la collection du Département de Parasitologie de l'Université Hébraïque de Jérusalem.” XLII (4), 571-585. [1935.]
- c. DUBOIS, G.—“*Neodiplostomum impraeputiatum* Dubois, 1934, nouveau parasite d'oiseaux (Trematoda: Alariidae).” XLII (4), 587-592. [1935.]

(647a) Hsü describes *Oochoristica hainanensis* n. sp., and redescribes from type material *O. brasiliensis*, *O. breslaui*, *O. cryptobothrium*, *O. lagrangei* and *O. theileri*. Questions of specific characters and synonymy within this

genus are discussed. A new genus *Khawia* is erected to include *K. sinensis* n. sp. and *K. (= Caryophyllaeus) japonensis*, both from *Cyprinus carpio*. The family Nematotaeniidae is discussed, and a new genus, *Baerietta* described with two species, *B. baeri* n. sp. and *B. (= Nematotaenia) jägerskiöldi*. Two new genera of Dilepididae are created, namely *Paradilepis* n. g., with two species, *P. duboisi* n. sp., and *P. (= Dilepis) scolecina*; and *Ophiovalipora houdemeri* n. g., n. sp. Other descriptions include *Ophiotaenia nankingensis* n. sp., *Diphyllbothrium fuhrmanni* n. sp., *Deltokeras delachauxi* n. sp., *Hymenolepis peipingensis* n. sp., *Raillietina (Paroniella) huebscheri* n. sp., and a new parasite of the rat, *R. (Raillietina) sinensis* n. sp. A list is appended of all cestodes so far reported from China. E.M.S.

(647b) Dubois redescribes here four strigeids originally described by himself in 1934 in "Actes de la Société Helvétique des Sciences Naturelles" pp. 374-375. They are: *Apharyngostrigea flexilis*, *Cotylurus hebraicus*, *C. syrius* and *Prohemistomum syriacum*. A table is given to separate the latter from its nearest relative, *P. industrium* Tubanguui. E.M.S.

648—Revue Vétérinaire et Journal de Médecine Vétérinaire et de Zootechnie.

- a. MOUSSARON, A.—"Téniasis mortel chez la jument." LXXXVII, 619-620. [1935.]

(648a) Moussaron records heavy infestation by *Anoplocephala perfoliata* as the cause of the death of two mares and gives a short account of the symptoms and post mortem findings. J.W.G.L.

649—Revue Vétérinaire Militaire.

- a. HOUEMER, E.—"Le problème de l'anémie vermineuse des équidés." XIX, 409-441. [1935.]
- b. LESBOUYRIES, M.—"Le pigeon voyageur et ses principales maladies." XIX, 443-453. [1935.]

(649a) Houdemer has made a survey of the literature relating to verminous anaemia in the horse caused by cylicostomes. He summarizes the geographical distribution of the disease in France and shows that the conditions to which army horses are subjected aggravate the disease and cause heavy economic loss to the French military establishment. For the control of the disease he recommends the adoption of various hygienic measures, together with regular anthelmintic treatment. J.W.G.L.

(649b) Lesbouyries states that the important helminth parasites of carrier pigeons are *Capillaria columbae* and *Ascaridia columbae*, both of which cause symptoms of cachexia. Internally there is enteritis with possible haemorrhages into the intestine. Diagnosis can only be made by finding the eggs in the stool. There may be repercussions in the central nervous system in heavy infestations. P.A.C.

650—Revue de Zoologie et de Botanique Africaines.

- a. SANDGROUND, J. H.—"A redescription of *Filaria pertenuis* Rodhain 1919 and the creation of a new genus, *Protofilaria*, for its reception." XXVII (2), 246-253. [1935.]

- b. VUYLSTEKE, C.—“Nématodes parasites de l'okapi.” xxvii (3/4), 313-318. [1935.]
- c. VUYLSTEKE, C.—“Étude de quelques nématodes parasites de l'éléphant.” xxvii (3/4), 319-325. [1935.]

(650a) Recent findings in tropical and subtropical Africa that various forms of onchocerciasis enjoy a wide distribution in cattle and has been found in several species of antelopes (*Hippotragus* spp. and *Cephalophus* spp.) made it desirable to establish the phylogenetic affinities of *Filaria pertenu* Rodhain, 1919, discovered in *Cephalophus sylvicultor*. After describing *Protofilaria pertenu* (Rodhain, 1919) Sandground gives his reasons for transferring it from *Filaria*. In several respects *F. pertenu* differs from *F. martis* and resembles *F. setariosa* but it shows no greater affinity with the latter species than it does with the former. Certainly the 3 species cannot be considered as congeneric without necessitating radical emendations in the generic diagnosis. In *F. pertenu* the cephalic papillae persist in a manner that is unique in the family, exhibiting a primitiveness that is reminiscent of the Spiruroid genus *Thelazia*. Consequently Sandground proposes to refer *F. pertenu* to a new genus *Protofilaria* which he defines as follows: Filariinae—mouth without lips; full complement of 6 papillae in an internal ring and 8 submedian papillae in an external ring; amphidial pores slit-like. Cuticle transversely striated. Lateral alae and cervical papillae absent. Stoma shallow. Oesophagus simple. Tail short and devoid of terminal appendages. Male without caudal alae. Spicules dissimilar and unequal. Caudal papillae minute and reduced in number. Female viviparous: vulva in oral region, ovejector well developed.

A.E.F.

(650b) The following species are recorded from *Okapia johnstoni* in the Congo: *Oesophagostomum rodhaini* n. sp., *Parabronema okapiae* n. sp. and *Trichuris globulosa* v.L. 1901.

R.T.L.

(650c) Seven species of nematodes from the African elephant are described, viz.: *Amira* sp.?, *Quilonia africana*, *Q. apiensis*, *Murshidia longicaudata*, *M. hadia*, *Grammocephalus clathratus* and *Syngamus loxodontis* n. sp. This new gapeworm is nearly related to *S. indicus*, differing in the structure and dimensions of the bursa and the greater size of the buccal capsule.

R.T.L.

651—Rivista Sanitaria Siciliana.

- a. CATALIOTTI, F.—“L'echinococco della tiroide.” xxiii (14), 1064-1072. [1935.]

652—Schriften der Physikalisch-Ökonomischen Gesellschaft zu Königsberg.

- a. SZIDAT.—“Neue Entdeckungen aus dem Gebiet der Parasiten des Menschen.” LXVIII (3/4), 294-298. [1935.]

(652a) Szidat describes briefly recent advances in human helminthology in Germany. He mentions the work of Mehl on *Limnaea truncatula*. Recent work on *Dicrocoelium dendriticum* by Nöller and Vogel, and later by Mattes in Marburg, showed *Cercaria vitrina* to be the larval stage. Work on the life-history of *Opisthorchis felineus*, and on *Bothriocephalus anaemia* (Vogel and Wigand) are also mentioned. Szidat concludes with a summary of views

on the mode of spread of helminths in Germany. It is concluded that the spread of both *Ascaris* and *Trichuris* is mainly conditioned by the presence or absence of suitable sanitary conveniences. A.E.F.

653—Schweizer Archiv für Tierheilkunde.

- a. BENOIT, R.—“Contribution à l'étude des nodules et des kystes parasitaires du foie chez le cheval.” LXXVII (9), 462-470. [1935.]
- b. GALLI-VALERIO, B.—“Notes parasitologiques.” LXXVII (12), 643-647. [1935.]

(653a) Parasitic nodules have frequently been recorded in the liver of horses due to the presence of trematodes and nematodes. At Lausanne 37% of the horses slaughtered in the abattoirs show these nodules. In 13.5% of the nodules examined Benoit has found eggs of *Fasciola hepatica*. Nematodes were exceedingly rare. In 1.8% there were cysts due to *Echinococcus* and in 2.5% foreign bodies originating from the gut gave rise to nodules. R.T.L.

(653b) Galli-Valerio illustrates larval tapeworms found encysted in *Aphodius obscurus* which he believes to be the early stages of *Cittotaenia marmotae*. He also describes briefly an enteritis in *Cypselus apus* due to enormous numbers of *Plagiorchis maculosus*. R.T.L.

654—Science Reports of the Tôhoku Imperial University. Series IV. Biology.

- a. TORYU, Y.—“Contributions to the physiology of the *Ascaris*, III. Survival and glycogen content of the *Ascaris*, *Ascaris megalocephala* Cloq., in presence and absence of oxygen.” x (2), 361-375. [1935.]

(654a) Toryu has carried out experiments in vitro with *Ascaris megalocephala* which show that the presence of carbon dioxide is favourable to the period of survival of the worm, whereas the presence of oxygen is unfavourable. Under anaerobic conditions, glycogen consumption is almost entirely confined to the first half of the period of survival, whilst under aerobic conditions it continues throughout the entire period. During starvation the glycogen consumed is that stored in muscle cells and developing young reproductive cells, but not that stored in the adult reproductive cells. The presence of valeric, lactic and propionic acids in the liquid around the worms, suggests that the decomposition of glycogen takes place by a fermentation process. R.H.H.

655—Science Reports of the Tokyo Bunrika Daigaku. Section B.

- a. FUKUI, T. & OGATA, T.—“Note brève sur un nouveau trématode *Tetrochetus hamadai* provenant du *Spheroides spadiceus*.” II (Report No. 36), 149-154. [1935.]

656—Scientific Agriculture.

- a. PUTNAM, D. F. & CHAPMAN, L. J.—“Oat seedling diseases in Ontario. I. The oat nematode *Heterodera schachtii* Schm.” xv (9), 633-651. [1935.]

(656a) Putnam & Chapman record the occurrence of the oat strain of *Heterodera schachtii* distributed over an area of about 30 square miles in

Ontario. Although first diagnosed in 1933 the infection is one of at least 10 years standing. A detailed account of the symptoms is given. Soil surveys showed that in 90% of cases the infection occurred in silty clay loam; fewer infected areas and less damage to crops were found in light soils. Experiments to control the disease by means of sulphur, formaldehyde, acetic acid, pyroligneous acid and a wide range of fertilizer dressings proved useless.

M.J.T.

657—Semana Médica.

- a. GRAVANO, L.—“Tumor benigno del diafragma (salvando un error de diagnóstico).” XLII (36), 705-709. [1935.]
- b. NIÑO, F. L.—“Triquinosis experimental en la rata.” XLII (41), 1045-1059. [1935.]
- c. VALLARINO, D. & CICHERO, C.—“Quiste calcificado de hígado.” XLII (47), 1565-1567. [1935.]

658—Sinensia. Contributions from the Metropolitan Museum of Natural History, Nanking.

- a. HU, S. P.—“On the intestinal worms of goats in Nanking.” VI (6), 698-700. [1935.]

659—Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin.

- a. WETZEL, R.—“Die Beziehungen parasitischer Würmer zum Wirtstier.” Year 1935 (8/10), 291-304. [1935.]

(659a) Wetzel, in an interesting discussion of the host-parasite relationship, summarizes much recent work on the mechanical effects of parasites, effects through deprivation of food, and effects of the parasite's excretions and secretions on the host, and the protective responses thereby induced. He sees the relationship as a precarious equilibrium which can be upset in favour of either the host or the parasite. The discussion touches upon aspects of physiology, pathogenesis and immunity too numerous to be detailed here.

B.G.P.

660—Skandinavisk Veterinär-Tidskrift.

- a. PLAZIKOWSKI, U.—“Sugmaskar som orsak till enzootiskt uppträdande äggledareinflammation hos höns.” Year 1935, 731-749. [English summary p. 748.] [1935.]

(660a) Plazikowski describes inflammation of the oviduct of hens in Sweden caused by the presence of *Prosthogonimus pellucidus*. The disease is prevalent in early summer and usually runs a fatal course, death occurring within 24 hours after the appearance of symptoms. It is suggested that snails are an intermediate host.

P.A.C.

661—South African Journal of Science.

- a. THEILER, G.—“Some recent developments in the study of parasitic worms.” xxxii, 49-71. [1935.]

(661a) In her presidential address to Section D of the South African Association for the Advancement of Science, Theiler reviews the more recent developments in helminthology and shows that the modern trend is towards the elucidation of problems on host parasite relationships.

Although researches on life-histories are still claiming the attention of helminthologists, the review shows that important contributions have already been made to our knowledge of problems such as the physiology of the host and that of the parasite, the host-responses, the pathogenicity of the parasite and the bionomics of its developmental stages. D.O.M.

662—Sovetskaya Khirurgiya.

- a. MILCHIK, M. I.—[Case of echinococcosis of muscles of leg.] No. 7, 150-151. [1935.]
- b. MELNIKOV, A.—[Surgical therapy of echinococcosis.] No. 10, 3-19. [1935.]

663—Sovetskaya Vrachebnaya Gazeta.

- a. KALYUS, V. A.—[Diagnosis of trichinosis in man.] 1935, pp. 1907-1912. [1935.]

664—Sovetskiy Vestnik Oftalmologii.

- a. KOLENKO, A. B.—[Case of subretinal cysticercosis cured by roentgen rays.] VII, 393-397. [1935.]

665—Taiwan Igakkai Zasshi.

- a. TO, S. & KO, B.—“Erfahrungen in der Behandlung der Lungen-Distomiasis mit Carpain.” xxxiv (12), 2070-2076. [In Japanese: German summary p. 2077.] [1935.]

(665a) To & Ko found that, in two untreated cases of pulmonary distomiasis, subcutaneous injections of carpain hydrochloride in physiological saline effected a complete cure: symptoms disappeared and no more ova were found. In two cases previously treated with Emetine, the cure was incomplete. The drug was used in 5% solution of which daily injections of from 0.5 c.c. to 2.0 c.c. were given up to a total of 1 g. or less. B.G.P.

666—Technical Bulletin. Michigan Agricultural Experiment Station.

- a. STAFSETH, H. J.—“On the control of tapeworm infestation in chickens with notes on the pathology of the intestines of the hosts.” No. 148, 46 pp. [1935.]

(666a) Stafseth recommends the use of iodine as a vermicide in birds. It kills strobilae of tapeworms and nematodes immediately, but a second or third dosing is often necessary to kill young stages which may have been located deep in mucosa, between the villi. Iodine fails to penetrate deeply into the mucosa. *Raillietina cesticillus* and *Hymenolepis carioca*, common parasites in Michigan, produce a reaction which is described. P.A.C.

667—Technical Bulletin. United States Department of Agriculture.

- a. ALICATA, J. E.—“Early developmental stages of nematodes occurring in swine.” No. 489, 96 pp. [1935.]

(667a) In his studies on the nematode parasites of swine, Alicata has paid particular attention to the morphology and bionomics of the early larval stages. New intermediate hosts are reported for *Gongylonema pulchrum*, *Ascarops strongylina* and *Physocephalus sexalatus*, and *Metastrongylus salmi* was successfully reared to the infective stage in earthworms. The development of the male and female reproductive organs were traced in the four larval stages of *Hyoststrongylus rubidus* and the author shows how sex can be differentiated in the pre-parasitic larval stages by the position of the posterior cell of the group of giant cells in the body cavity. In addition to the numerous illustrations the bulletin contains useful tables giving the differential characters and measurements of the eggs and infective larvae. D.O.M.

668—Trabalho do Centro de Estudos e Prophylaxia da Lepra.

- a. PEREIRA, P. C. R. & ANDERSON, H. H.—“O emprego do ‘Hexylresorcinol’ como antihelmintico.” [Reprint 7 pp.] [1935.]

(668a) Pereira & Anderson have found hexylresorcinol useful as an ascaricide, but ineffective against other helminths. Of 21 patients harbouring *Ascaris lumbricoides* 20 were cured by dosing with this drug in the method recommended by Lamson and his associates. Of 20 cases with hookworm only 2 were cured by this method. No other intestinal helminths were removed by the drug. K.S.

669—Transactioes Societatis Pathologicae Japonicae.

- a. TSUNODA, T., SHIRAI, S. & NAKAMOTO, T.—“Über den Infektionsmodus der *Taenia polycephalica* canina japonica sowie die Unterschiede zwischen dem Blasenwurm der *Taenia polycephalica* canina jap. und dem der *T. multiceps serialis*.” xxv, 155-158. [In German.] [1935.]
- b. EGUCHI, S. & KITAYAMA, H.—“Über die Beziehung zwischen dem Tropismus von *Ankylostomalarven* und der Artspezifität des Serums sowie der Immunität.” xxv, 158-162. [In Japanese.] [1935.]

(669a) A coenurus occurs in wild hares in Japan, usually muscular or subcutaneous in location, which appears to be specifically distinct from *Multiceps serialis*. The cyst and contained scolices are smaller, the cyst-wall is thinner, and daughter-cysts are frequent. Tsunoda, Shirai & Nakamoto describe in detail the adult, produced experimentally in the dog, and call it “*Taenia polycephalica* canina japonica.” Occasionally hares harbour both species of coenurus. B.G.P.

670—Transactions of the American Association of Genito-Urinary Surgeons.

- a. STEVENS, A. R.—“Schistosomiasis involvement of the upper urinary tract; report of patient with papillomata of renal pelvis, ureter, and later of bladder.” xxviii, 275-285. [1935.]

671—Transactions of the American Laryngological Association.

- a. IMPERATORI, C. J.—“A case of malignant laryngeal growth implanted on tissues, the deeper layers of which were infected with trichini.” LVII, p. 242. [1935.]

672—Transactions on the Dynamics of Development.

- a. ZAWADOWSKY, M. M. & VOROBIEVA, E. I.—“The ultra-violet light of the quartz-lamp as a prophylactic factor in the struggle against Ascaridosis. (Preliminary report).” IX, 331-339. [In Russian: English summary p. 340.] [1935.]
- b. ZVJAGUINZEV, S. N.—“Investigations on the biology of eggs and the distribution of Trichostrongylidae larvae in sheep farms. Material for working out of sanitary prophylactic measures against trichostrongylidosis.” IX, 341-353. [In Russian: English summary p. 354.] [1935.]
- c. MALEVITCH, J. J.—“On the infection of lambs with helminthes.” IX, 355-359. [In Russian: English summary p. 360.] [1935.]

(672b) In his field studies on the eggs and larvae of sheep helminths in Russia Zvjaguinzev found that, although pastures may contain viable eggs of the trichostrongyles of sheep, no infection can take place in winter as the eggs do not hatch and that in the spring when pasturing begins the ground is free from infective larvae.

The development of the eggs and larvae on the Steppes in summer depends on the presence of vegetation to provide suitable conditions for such development and even when larvae do hatch their development to the infective stage is frequently delayed.

D.O.M.

(672c) Malevitch found that lambs kept in clean pens and fed with grass from infected fields became infected with strongyles and *Moniezia* but when kept entirely on a dry clean fold there was no infection except with *Strongyloides*. Uninfected lambs placed on infected pastures passed strongyle eggs on the 18th day while *Moniezia* eggs appeared on the 35th to 36th day.

D.O.M.

673—Transactions of the Pasteur Institute of Epidemiology and Bacteriology in Leningrad.

- a. STROM, G. K.—“Incidence of helminthiasis among the population of the Kola Peninsula.” II, 110-116. [In Russian: English summary p. 228.] [1935.]
- b. DANSKER, V. N., WITE, L. E. & ALEXANDER, L. L.—“The results of an examination of a group of nutrition workers of Leningrad as helminth-carriers.” II, 117-122. [In Russian: English summary pp. 228-229.] [1935.]
- c. PHILIPTCHENKO, A. A. & DANSKER, V. N.—“On epidemiology of ascariasis.” II, 123-147. [In Russian: English summary pp. 229-231.] [1935.]
- d. KHAUSTOV, J. M.—“Vegetables as a factor in transmission of *Trichocephalus trichiuris* [trichiurus].” II, 148-152. [In Russian: English summary p. 231.] 1935.]
- e. SHTCHOUPAKOV, J. G.—“On the possibility of reinfection of muscle tissue with *Trichinella spiralis*. (On the question of immunity in trichiniasis).” II, 153-162. [In Russian: English summary pp. 231-232.] [1935.]
- f. WITE, L.—“On the problem of the effectiveness of phenol disinfectants in respect of *Ascaris* and *Trichocephalus* eggs.” II, 163-168. [In Russian: English summary pp. 232-233.] [1935.]

- g. ALEXANDER, L. L. & DANSKER, A. N.—“Flies as transmitting agents in the spread of intestinal parasites.” II, 169-179. [In Russian: English summary pp. 233-234.] [1935.]

(673b) Between 1931-1933 Dansker, Wite & Alexander have examined about 1,500 workers of various food enterprises in Leningrad for helminth infestations. Up to 50% of these people were carriers and they have evidence that the incidence of *Enterobius vermicularis* is increasing while in 1933 there seemed to be a decrease in carriers of *Ascaris*. P.A.C.

(673c) Philiptchenko & Dansker find that undeveloped eggs of *Ascaris lumbricoides* can withstand very low temperatures and considerable fluctuation of temperature. They are, however, much more susceptible to such changes when they have developed to the infective stage. Desiccation soon proves lethal to all eggs. Heavy new infections occur in winter and spring and are due to the pollution of living quarters with eggs. The primary method of infection is by direct contact with the environment and with carriers. P.A.C.

(673d) Khaustov thoroughly washed a large variety of fruit and vegetables and after centrifuging the washing water, examined the sediment for helminth eggs. Out of 650 analyses there were found 9 eggs of *Trichocephalus trichiurus*, 6 eggs of *Ascaris lumbricoides* and 1 egg of *Enterobius vermicularis*. These were all found on carrots or cucumbers. P.A.C.

(673e) Shtchoupakov finds that in trichiniasis there develops an immunity within the muscles as well as one in the intestine. Rats were re-infected with trichina and during the first few days there was a high mortality. This was probably caused by chemical changes in the intestinal media as a result of the first infection. A few which reached sexual maturity produced embryos, the majority of which perished before they could penetrate the circulatory system. Even if they succeeded so far in the life cycle, very few were able to penetrate the muscles unless the first infection was too light to cause an immunity. P.A.C.

(673f) Wite finds that the eggs of *Ascaris* and *Trichocephalus* are highly resistant to the action of various phenol compounds which are in general use as disinfectants. A mixture containing 20% of potassium soft soap, 15% turpentine, 15% lysol and 50% solvent was only lethal after at least 4 days immersion. Lysol 8% or 10% and carbolic acid 4.5% solution had little effect on eggs in the first half hour—a few *Ascaris* eggs were killed and others showed a retarded development. P.A.C.

(673g) Alexander & Dansker are of the opinion that house flies are transmitters of helminth eggs and protozoan cysts. *Ascaris*, *Trichocephalus*, *Enterobius*, *Diphyllobothrium*, *Taenia* spp. and *Hymenolepis* eggs and oncospheres were found to be ingested and subsequently disseminated in the droppings of the flies. The degree of transmission depended on the size of the egg and the power of the flies to ingest it. The eggs did not seem to be carried on the surface of the body. P.A.C.

674—Travaux et Comptes Rendus. Institut de Recherches des Forêts d'État à Varsovie.

- a. KARPINSKI, J. J.—“Les causes qui limitent la reproduction de *Bostryches typographes* (*Ips typographus* L. et *Ips duplicatus* Sahlb.) dans le forêt primitive.” A, No. 15, 1-86. [1935.]

(674a) Karpinski has investigated the bionomics of two bark-beetles, *Ips typographus* L. and *I. duplicatus* Sahlb., on spruce in the Forest of Bialowie during September-November, 1933. In a separate section the author discusses the natural factors, such as conditions of overcrowding, woodpeckers, nematodes, predacious insects, etc., which control the increase of beetle population in the forest and summarizes the effects of each factor in a table. Little information is given about nematodes which are reported as common on the adults, larvae and pupae and in the galleries of the beetles. A list of the worms found is promised for publication after the species have been identified. J.N.O.

675—Travaux de la Filiale de l'Académie des Sciences de l'USSR au Tadjikistan.

- a. SMIRNOV, G. G.—“Sur l'hématophagie des nématodes parasitiques.” No. 5, 95-117. [In Russian.] [1935.]

(675a) Reviewing the phenomenon of haematophagia among the various superfamilies of parasitic nematodes, Smirnov finds that it is usually facultative. Where obligatory, it is of great pathological importance to the host. B.G.P.

676—Travaux de la Station Zoologique de Wimereux.

- a. GALLIEN, L.—“Recherches expérimentales sur le dimorphisme évolutif et la biologie de *Polystomum integerrimum* Fröhl.” XII (1), 1-181. [1935.]

(676a) Gallien deals with all aspects of the common trematode of the urinary bladder of *Rana temporaria*. His interest centres in the “néoténique”—the mature sexual form produced when the gyroductoid larva happens to attack a very young tadpole. His numerous experiments throw considerable light on the laws governing the incidence of this form, and he is able to show that the high percentage infestation with this trematode is due to its capacity to produce a “néoténique” form. E.M.S.

677—Tunisie Médicale.

- a. BRUN, R. G.—“Quelques réflexions cliniques et thérapeutiques sur les kystes hydatique de la rate.” XXIX (1), 1-12. [1935.]
 b. BROU, R. & MAMI, A.—“Kyste hydatique calcifié du foie - petits abcès-cancer sus-vatérien.” XXIX (3), 108-109. [1935.]
 c. LEHUCHER & ROLLIN.—“Un cas de kyste hydatique de l'ovaire.” XXIX (10), 468-470. [1935.]
 d. BROU, R. & MAMI, A.—“Schistosomiase intestinale.” XXIX (10), 477-478. [1935.]

678—Union Médicale du Canada.

- a. LAPIERRE, G., MAJOR, W. & MARTIN, P.—“Un cas mortel de trichinose.” LXIV, 1127-1136. [1935.]

679—University of Wyoming Publications.

- a. HONESS, R. F.—“Studies on the tapeworms of the Black Hills cottontail rabbit, *Sylvilagus nuttalli grangeri* (Allen) with special reference to the life history of *Cittotaenia variabilis* Stiles.” II (1), 1-10. [1935.]

- b. SIMON, J. R.—“A new species of nematode, *Bulbodacnitis scotti*, from the trout, *Salmo lewisi* (Girard).” II (2), 11-15. [1935.]

(679a) Honess is led to the opinion that an intermediate host is essential in the life cycle of *Cittotaenia variabilis* by observing the growth and changes in density of the scolex in the final host and comparing them with the egg stage. The increase in mass and change in structure from the hexacanth embryo to the adult scolex is such that the change must take place in a nutritive medium permitting growth.

P.A.C.

(679b) Simon describes *Bulbodacnitis scotti* from *Salmo lewisi* in Wyoming. It differs from *B. globosa* and *B. bulbosa* in its dimensions, mainly in its length, the length of the female tail and the spicules, and in the small size of the bulb on the head.

P.A.C.

680—Veterinäre Gesundheitsdienst.

(Published as Prager Tierärztliches Archiv. Sonderheft 1.)

- a. MARTIN, W.—“Technische Neuerungen für den Trichinenschau-Grossbetrieb.” pp. 30-36. [1935.]

(680a) Martin gives an account of improvements, which have been developed at Aussig, in the technique and apparatus used in the detection of trichinosis in slaughtered swine. Carcase and pluck, although hung separately, are identified by numbered discs and duplicate preparations of muscle tissue in compressoria examined by two observers. Refinements in the trichinoscope and its related apparatus are also discussed.

J.N.O.

681—Veterinarski Arhiv.

- a. BABIĆ, I.—“O nalazima entoparazitičkih crva kod slatkovodnih riba.” v (8), 356-366. [German summary pp. 366-367.] [1935.]

(681a) Babić analyses the results of helminthic examination of 165 fish from the Zirknitzersee, and from hatcheries at Prijedor (pike) and at Ogulin (rainbow trout). He records among other forms, 4 trematodes, 6 cestodes, 1 nematode and 5 acanthocephala. He claims that *Triaenophorus nodulosus* is not the cause of “Pest” of pike, since many diseased fish are quite free from the parasite. The fish from the Zirknitzersee showed a higher percentage of *Triaenophorus* and other helminths in sound than in diseased specimens.

E.M.S.

682—Veterinary Bulletin. Civil Veterinary Department. Punjab.

- a. HANDA, B. N.—“Some important diseases of sheep in the low-land, inundated, and water-logged areas of the Punjab, with a particular reference to the control measures at the Government Cattle Farm, Hissar.” No. 3, 12 pp. [1935.]

683—Veterinary Journal.

- a. DEW, H. R.—“Hydatid disease. A general survey.” XCI (11), 481-493. [1935.]

(683a) [This article is reprinted from Med. Pr. See above No. 584a.]

684—Veterinary Medicine.

- a. DAMON, A.—“Internal parasites of the dog.” xxx (5), 217-220. [1935.]
- b. LEWITUS, V.—“Drugs used in veterinary medicine. V. Santonica—the source of santonin.” xxx (5), 221-223. [1935.]
- c. GILYARD, R. T.—“The common palisade worm; *Strongylus vulgaris*.” xxx (6), 254-255. [1935.]
- d. SCHAFER, F. N.—“Ascariasis of horses.” xxx (8), 353-354. [1935.]
- e. BOZICEVICH, J. & WRIGHT, W. H.—“Carbon disulphide for the removal of stomach worms from swine.” xxx (9), 390-393. [1935.]
- f. STEINBACH, F. G.—“Arsenic and areca nut not dependable in filariasis.” xxx (9), p. 413. [1935.]
- g. MILLS, R. H.—“Bone weakness due to nematode infestation in animals on ladino clover pasture.” xxx (10), 424-428. [1935.]
- h. STAFFORD, C. D.—“Common parasites of the cat.” xxx (10), 438-441. [1935.]
- i. HORNING, J. G.—“The treatment of whipworm infestation in dogs.” xxx (11), 480-482. [1935.]
- j. DIBBELL, E. B.—“Handling heart worm disease in practice.” xxx (11), 493-499. [1935.]
- k. EHRLICH, D.—“Tetrachlorethylene in the treatment of hookworms and round worms.” xxx (12), 525-526. [1935.]
- l. HINKLE, jr., T. C.—“Unusual tapeworm cysts in a rabbit.” xxx (12), p. 529. [1935.]

(684b) Lewitus describes the method of preparation and properties of santonin, the anthelmintic constituent of Santonica. The therapeutics and toxicology of the drug are also discussed.

R.H.H.

(684e) Bozicevich & Wright find that carbon disulphide is a useful anthelmintic for stomach worms in swine when administered by stomach tube after preliminary fasting. The minimum dose was 0.1 c.c. per kg. or 4.5 c.c. per 100 lb. body weight. It was 85.8% effective against *Hyoststrongylus rubidus* and 96.4% effective against *Ascarops strongylina*. Of 30 pigs, 27 showed symptoms of a transitory gastritis, 3 reacted by vomiting and dizziness and one was prostrate.

P.A.C.

(684f) Steinbach is now of the opinion that the favourable results of arsenic and areca nut on *Dirofilaria* in dogs, reported by him in a preliminary report [see Helm. Abs., Vol. II, No. 472c], is due to the large doses of arsenic stimulating metabolism of the host and not to any anthelmintic action.

J.W.G.L.

(684g) Mills gives an account of an outbreak of disease occurring in sheep and cattle on three ranches in California where animals were pastured on ladino clover. The symptoms were chiefly weakness, emaciation and diarrhoea associated with heavy nematode infection and on two ranches with bony changes although sufficient minerals were received by all the animals. Treatment with anthelmintics met with varying degrees of success. The author considers that the management of ladino clover consisting of irrigation every 7 to 10 days during dry seasons gives ideal environment for the building up of high infestations and that the bone lesions were secondary to the helminth infection.

J.W.G.L.

(684i) Horning describes the use of hexylresorcinol as a successful anthelmintic against whipworms in dogs. He quotes Caldwell (1929) as

having used very effectively the latex of *Ficus laurifolia* shipped in dark green bottles from S. America. It was kept in a cold room or refrigerator for nearly a year without losing its anthelmintic value.

J.W.G.L.

(684j) Dibbell records *Dirofilaria* in 10 to 18% of dogs in Baltimore and summarizes its life history, diagnosis, treatment, etc.

J.W.G.L.

(684k) Ehrlich summarizes previous work on tetrachlorethylene and gives the following dosages:—dogs or foxes weighing 8 to 10 pounds, give 1 c.c.; 10 to 20 pounds, give 2 c.c.; 20 to 30 pounds, give 3 c.c., or add 1 c.c. for each 10 pounds above 20. For puppies weighing 2 pounds, give 0.3 c.c.; 2 to 4 pounds, give 0.4 c.c.; 4 to 6 pounds, give 0.6 c.c., and for puppies weighing 6 to 8 pounds, give 0.8 c.c.

R.T.L.

(684l) Hinkle describes *Cysticercus pisiformis* of unusual size and shape from the abdominal cavity of a rabbit. Instead of the normal rather broad and pea-shaped appearance the cysts were long and narrow and measured from 16 to 28 mm. in length by 3 to 5 mm. in width as compared with normal cysts which are 5 to 9 mm. by 3 to 7 mm.

J.W.G.L.

685—Vida Nueva.

- a. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia de Pinar del Río. Pueblo: Artemisa.” xxxvi (4), 313-318. [1935.]
- b. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Trabajo resumen de la ciudad de La Habana.” xxxvi (6), 629-635. [1935.]

686—Vlaamsch Diergeneeskundig Tijdschrift.

- a. WAELE, A. DE.—“Analytische studie van den stimuleerenden invloed der gal op het evaginatiepraes bij de cestodenvinnen.” iv, p. 6. [1935.]

687—West African Medical Journal.

- a. WILSON, C.—“The treatment of elephantiasis of the limbs.” viii (4), p. 12. [1935.]
- b. LOVETT-CAMPBELL, A. C.—“Helminthiasis involving the appendix.” viii (4), p. 15. [1935.]

(687a) Injections of Fibrolysin, made every three days into the affected part, have markedly reduced redundant skin and greatly improved the lymph circulation in mild cases of elephantiasis.

R.T.L.

(687b) Two cases are reported with symptoms suggesting involvement of the appendix. In one the appendix showed subacute inflammation and cellular infiltrations associated with *Schistosoma haematobium* eggs in the submucosa and in the other a number of adult Oxyuris were found in the lumen.

R.T.L.

688—Wiadomości Weterynaryjne.

- a. SKŁADNIK, J.—“Trichoneminae u koni w polsce.” (Trichonèmes chez le cheval en Pologne.) xiv (177), 137-182. [In Polish: French summary pp. 182-183.] [1935.]
- b. NAGÓRSKI, F.—“Dwa przypadki pasorzytniczego zapalenia otrzewny u psów.” (Deux cas de peritonite parasitaire chez les chiens.) xiv (180), 342-348. [In Polish: French summary p. 348.] [1935.]

- c. ŁUKASIAK, J.—“Robaki pasorzytnicze i ich lokalizacja u psów w Warszawie.” (Les vers parasitaires et leur localisation dans l'organisme des chiens de Varsovie.) XIV (183), 477-486. [In Polish: French summary pp. 486-487.] [1935.]
- d. ŁUKASIAK, J.—“*Eucoleus aerophilus* (Creplin 1839) i *Crenosoma vulpis* (Dujardin 1845), nicienie narządów oddechowych, psa i lisa.” (*Eucoleus aerophilus* (Creplin 1839) et *Crenosoma vulpis* (Dujardin 1845), nematodes des organes respiratoires des chiens et des renards.) XIV (184), 533-540. [In Polish: French summary p. 540.] [1935.]

(688a) Składnik has encountered 24 species of Trichoneminae in 24 horses autopsied in Poland. Each species is described and figured and, as a result of clearing specimens with lactic acid, tooth-like structures have been found in the oesophageal funnel of several species. Reasons are advanced for regarding *Trichonema barbatum*, *T. bidentatum* and *T. sagittatum* as synonyms of *T. calicatum*, *T. asymmetricum* and *T. coronatum* respectively. Up to 21 species were found in a single horse. B.G.P.

(688c) Łukasiak records the results of a thorough helminthological examination, covering all organs, of 121 stray dogs in Warsaw. Brief descriptions of the worms are given, and their individual incidences as determined by Ruszkowski (1925), Penkacki (1931) and himself are set out in a table. Another table compares the dog helminths found in Russia with those found in Poland. The total incidence of helminths in Warsaw dogs was 77⁰., comprised of two trematode species, seven cestodes and seven nematodes. B.G.P.

689—Wiener Tierärztliche Monatsschrift.

- a. VAJDA, T.—“Vergiftung von Schweinen durch Chenopodiumöl und dessen unzuverlässige wurmtreibende Wirkung.” XXII (5), 142-145. [1935.]

(689a) From a long experience with numerous samples of chenopodium oil in pigs Vajda finds that individual samples vary considerably in ascaricidal effect, some having no such effect, and that the drug is frequently toxic in its action, sometimes lethal. The intoxication symptoms indicate that there is a direct effect on the central nervous system. B.G.P.

690—Wissenschaftliche Berichte der Moskauer Staats-Universität.

- a. LAUMAN, E. M.—“The postembryonal development of the representatives of the fam. Heterocheilidae and their life cycle.” Heft 4, 129-134. [In Russian: English summary p. 134.] [1935.]

(690a) Lauman shows that in the post-embryonal development of various genera of Heterocheilidae the oesophagus passes through an “Anisakis” stage preceding further differentiation. The encystment in fishes of some heterocheilid larvae, which are adult in piscivorous birds, shows the evolution of an indirect life-cycle not yet completely obligatory. B.G.P.

691—Zeitschrift für Augenheilkunde.

- a. LEWITSKY, M.—“Über den Cysticercus intraocularis.” LXXXVI (5/6), 300-322. [1935.]

692—*Zeitschrift für Briefftaubenkunde.*

- a. WETZEL, R.—“Saugwürmer aus der Familie der Echinostomiden als Darmparasiten in Tauben.” L (43), 1025-1026. [1935.]

(692a) Wetzel records disease in carrier pigeons near Hamburg due to the presence of *Echinoparyphium paraulum*, *E. recurvatum* and *Hypoderaeum conoideum*. These worms are usually found as adults in ducks and other aquatic poultry, the intermediate host being species of *Limnaea* and *Planorbis*. Infected birds are emaciated and suffer from diarrhoea. The wall of the duodenum is inflamed and haemorrhagic. Heavy infections prove fatal.

P.A.C.

693—*Zeitschrift für Urologie.*

- a. KÄMIL, F.—“Einige interessante Fälle aus dem Gebiete der Urologie.” XXIX (8), 554-561. [1935.]

(693a) [Four cases of echinococcus cysts in the kidney.]

694—*Zeitschrift für Vergleichende Physiologie.*

- a. HARNISCH, O.—“Daten zur Beurteilung des Sauerstoffverbrauchs von *Ascaris lumbricoides* (nach Messungen an isolierten Organen).” XXII (1), 50-66. [1935.]

(694a) Harnisch has measured the atmospheric-oxygen consumption of isolated organs of *Ascaris lumbricoides*. The oxygen consumptions of the body wall, uterus and ovary were about equal, but that of the intestine was considerably larger. The fluid of the body cavity in many cases consumed a small amount of oxygen. In explanation of these results the author suggests that the oxidisable substratum is a product of anaerobic metabolism, and that this is conveyed from the tissues by the body fluid to the intestine, where it is concentrated for excretion. Further experiments which were carried out gave results in support of this view.

R.H.H.

695—*Zentralblatt für Allgemeine Pathologie und Pathologische Anatomie.*

- a. FISCHER, W.—“Gallensteinbildung um Clonorchiseier.” LXIII (5), 164-167. [1935.]

696—*Zoogeographica.*

- a. BERG, L. S.—“Über die vermeintlichen marinen Elemente in der Fauna und Flora des Baikalsees.” II (4), 455-483. [1935.]

(696a) Berg discusses the question of the supposed marine elements in the fauna and flora of Lake Baikal. On p. 475 brief reference is made to nematodes and to their relevance to the hypothesis that the lake has marine elements.

T.G.

697—*Zvěrolékařské Rozpravy.*

- a. JANDA, J.—“Histologický obraz strongylosy plic u vepře.” IX (5), 56-60. [1935.]

(697a) [Histology of lungworm disease in pig.]

NON-PERIODICAL LITERATURE.

- 698—BALACHOWSKY, A. & MESNIL, L.—“Les insectes nuisibles aux plantes cultivées.” Paris, 2 vols., 1921 pp. [1935.]

This textbook of agricultural entomology by Balachowsky & Mesnil deals principally with the habits of, and control measures against, the insect pests of cultivated plants of France and the Mediterranean region. In the first volume is a short section which deals, *inter alia*, with the nematodes attacking cereals and graminaceous plants and includes species of *Anguillulina* and *Heterodera*. In the second volume further reference is made to various species of these two genera, the parasites being dealt with under the host plants they attack. [Much of the information concerning the worms appears to be based on Goodey's “Plant Parasitic Nematodes.”] J.N.O.

- 699—BARGER, E. H. & CARD, L. E.—“Diseases and parasites of poultry.” London, 354 pp. [1935.]

Barger & Card deal with avian diseases of poultry, including game birds, addressing themselves not only to the veterinarian and laboratory man but also to the poultry farmer. There is a useful chapter on diagnostic methods, including post-mortem examination, following those on general upkeep and anatomy. Poisons and nutritional diseases, conditions caused by virus, bacterial and protozoan organisms and external parasites are considered and a chapter is given over to helminth parasites. In this each worm is taken separately; its life history, pathology, symptoms, prevention and treatment are considered fully. Numerous original references are given. Illustrations are generally photographs. P.A.C.

- 700—BECKER S.—“Über verschiedenartige Krankheitsbilder bei Echinokokkusinfektion der Bauchhöhle unter Berücksichtigung ihrer Diagnose und Therapie.” Halle-Wittenberg, Dissertation, 31 pp.

- 701—BOCK, F.—“Acanthocephala, Kratzer.” In Schulze, P., Biologie der Tiere Deutschlands, Berlin, Lfg 38, Teil 9, 1-34. [1935.]

Briefly monographing the Acanthocephala, Bock restricts the systematics to a table of principal genera, with hosts, his text being concerned with general morphology and life-history. There are 19 figures and 39 references.

B.G.P.

- 702—BODENHEIMER, F. S.—“Animal life in Palestine. An introduction to the problems of animal ecology and zoogeography.” Jerusalem, [viii] + 506 pp. [1935.]

- 703—BUHR, K.—“Ueber Verbreitung und Stärke des Befalls von Hasen aus freier Wildbahn mit Parasiten unter Berücksichtigung geologisch-klimatischer Verhältnisse.” Berlin, Dissertation, 34 pp. [1935.]

Buhr reports on the parasites of 100 wild hares from different parts of Germany and Hungary, and discusses the influence of soil and climate on the spread of the parasites; thus, lungworms are prevalent in Thuringia and the Priegnitz where the soil is heavy and moisture is abundant. B.G.P.

- 704—CARR, J. W.—“The invertebrate fauna of Nottinghamshire. Supplement.” Nottingham, viii + 287 pp. [1935.]

Roebuck has contributed brief records of the occurrence of the following nematodes to Carr's book: *Mermis albicans*, *Anguillulina dipsaci*, *Heterodera schachtii*, *H. marioni*, *Aphelenchoides fragariae*, *A. ritzema-bosi* and *A. olesistus*.

T.G.

705—CHOURAQUI, R.—“Les procédés de destruction des kystes hydatiques dans un but prophylactique.” Algiers, Thesis, 90 pp. [1935.]

706—CORNILS, W.—“Systematische Untersuchungen über Strongylideneier und Strongyliden im Kot und Darminhalt des Pferdes.” Berlin, Dissertation, 43 pp. [1935.]

From his investigation on strongyle eggs and strongyles in the faeces and intestine of horses Cornils found that there was considerable day-to-day variation of faecal egg counts and also in morning, mid-day and evening samples, there being more uniform results from mid-day faeces. More eggs were found on the surface of the faecal globule than in the substance. Egg measurements were similar to those given in the literature except for *Trichonema* which were smaller. Differential diagnosis of eggs by size was found to be impossible. The ratio of strongyle eggs to adults present varied greatly and gave no guide as to the degree of infestation present.

J.W.G.L.

707—DE RIVAS, D. & DE RIVAS, C. T.—“Clinical parasitology and tropical medicine.” London, 367 pp. [1935.]

708—GAY, F. P. *et al.*—“Agents of disease and host resistance, including the principles of immunology, bacteriology, mycology, protozoology, parasitology, and virus diseases.” London, xiii + 1581 pp. [1935.]

709—GILLOT, V.—“Oxyurose.” In: *Encyclopédie Médico-Chirurgicale*, Paris. [Reprint 11 pp.] [1935.]

710—GILLOT, V. & SENEVET, G.—“Trichocéphalose.” In: *Encyclopédie Médico-Chirurgicale*, Paris. [Reprint 5 pp.] [1935.]

711—KHALIL, M.—“Chemotherapie der Schistosomiasis.” In: *Wissenschaftliche Woche zu Frankfurt a.M.*, Vol. III, pp. 231-237. [1935.]

[See also Helm. Abs., Vol. IV, No. 126f.]

712—MENON, T. B.—“Maharaja of Travancore Curzon Lectures (University of Madras) (1934-1935). Problems in filariasis.” Madras, [vi] + 67 pp. [1935.]

713—SCHUURMANS STEKHOVEN, jr., J. H.—“Nematoda errantia.” In: Grimpe & Wagler, “Die Tierwelt der Nord- und Ostsee.” Leipzig, Lieferung 28, Teil Vb, 173 pp. [1935.]

714—SCHUURMANS STEKHOVEN, jr., J. H.—“Nematoda parasitica.” In: Grimpe & Wagler, “Die Tierwelt der Nord- und Ostsee.” Leipzig, Lieferung 28, Teil Vc, 47 pp. [1935.]

(713 & 714) In this further instalment of Grimpe and Wagler's book, Schuurmans Stekhoven deals systematically with free-living nematodes (*Nematoda errantia*) and with parasitic forms (*Nematoda parasitica*). For the former a key of orders is given followed by one of families and genera.

Short accounts are given of the species within each genus together with measurements. There are a large number of excellent line drawings and about 13 pages of tables showing geographical distribution of species. This part closes with a discussion on bio-geography. The section on parasitic nematodes follows practically the same plan as that on the free-living forms; the various species being considered according to order, family and genus. This part ends with 6 pages of host lists and 6 of bibliography. T.G.

715—SENEVET, G.—“Cysticercose.” In: *Encyclopédie Médico-Chirurgicale*, Paris. [Reprint 3 pp.] [1935.]

716—SENEVET, G.—“Taeniasis et bothriocéphalose.” In: *Encyclopédie Médico-Chirurgicale*, Paris. [Reprint 4 pp.] [1935.]

717—SENEVET, G.—“Coenurose.” In: *Encyclopédie Médico-Chirurgicale*, Paris. [Reprint 1 p.] [1935.]

718—SENEVET, G. & LIÈVRE, H.—“Les distomatoses.” In: *Encyclopédie Médico-Chirurgicale*, Paris. [Reprint 6 pp.] [1935.]

719—SIMMONS, J. E. & GENTZKOW, C. J.—“Laboratory methods of the United States army.” Philadelphia, 4th Edition, xix + 1091 pp. [For Helminthology see pp. 891-906.] [1935.]

720—SMIRNOV, G. G.—“Nutrition of the *Ascaris* larvae in the process of migration.” In: “Parasites, transmetteurs, animaux venimeux.” *Recueil des Travaux dédié au 25me Anniversaire Scientifique du Professeur Eugène Pavlovsky, 1909-1934*, pp. 298-306. Moscow. [In Russian: English summary p. 306.] [1935.]

Smirnov has examined sections of liver and lung of guinea-pigs artificially infected with *Ascaris lumbricoides* and concludes that for the first 24 to 48 hours the larvae feed on blood plasma. Later they ingest red blood cells, but possibly do not digest them. While the adult ascaris is probably not normally a blood feeder, it will ingest blood resulting from pathological conditions in the intestine. Some 30 references on this point are cited. B.G.P.

721—SPREHN, C.—“Helminthen aus Kleinsäugern und Amphibien vom Schneeberg.” In: Pax, F., “Beiträge zur Biologie des Glatzer Schneeberges,” Breslau, Heft 1, pp. 82-86. [1935.]

Sprehn's helminthic material includes Szidat's (1928) *Distomum exasperatum* Rud. which Sprehn regards as a distinct species, *Paraplagiorchis szidati* n. sp. It was found in *Crocidura mimula*. *Paranematospira muris* n.g., n. sp., from *Apodemus* spp., is described and differentiated from *Heligmosomoides* and *Nematospira*. Porrocaecum larvae in *Sorex araneus*, *Trichuris muris* and *Syphacia obvelata* in *Apodemus flavicollis*, and Aplectana fragments in *Salamandra maculosa* complete the list. B.G.P.

722—VIQUEZ, C.—“Animales venenosos de Costa Rica: Parásitos intestinales de nuestros animales.” San José, 313 pp. [1935.]

Some notes are given of the endoparasites of poisonous animals, particularly reptiles, in Costa Rica. R.T.L.

723—VOVAN-CAN.—“Recherches épidémiologiques sur l'helminthiase dans la population infantile de la Région Provençale.” Marseille, Thesis, 48 pp. [1935.]

- 724—WARD, H. B.—“The longevity of *Diphyllbothrium latum*.” In: “Parasites, transmetteurs, animaux venimeux.” Recueil des Travaux dédié au 25me Anniversaire Scientifique du Professeur Eugène Pavlovsky, 1909-1934, pp. 288-293. Moscow. [In English: Russian summary p. 294.] [1935.]

Ward suggests that present-day conceptions regarding the longevity of this parasite are erroneous and that multiple successive infections are frequently attributed to a single long-lived specimen and gives a detailed review and analysis of the evidence hitherto published both in general works and special monographs and cites as specially important the history of the occurrence of this species on the North American continent. He points out that the age of the parasite is regularly based on the statement that the host had not been in an infected region for the period indicated. To this statement the objections are put forward that the distribution of the parasite and the natural occurrence of plerocercoid-carrying fish are far more extensive than was formerly suspected and, further, that infected fish are distributed commercially as food to regions far outside their natural area of distribution. From certain records it would seem that there is a “period of inactivity” during the adult life of the parasite and that its occurrence throws doubt upon the supposed longevity of the parasite.

R.T.L.

- 725—WENIGER, H.—“Versuche zur Verbesserung der Methoden zum morphologischen Studium bescheideter Larvenstadien der Pferdestrongyliden.” Berlin, Inaugural-Dissertation, 42 pp. [1935.]

Weniger describes his methods for a morphological study of the sheathed larvae of horse strongyles. He obtains the larvae by storing fresh faeces, loosely packed and slightly moistened, in glass jars in the dark at 20 to 21°C. Differential diagnosis is greatly assisted by staining larvae with acid carmine or acid fuchsin. Treatment for $\frac{1}{2}$ to 1 $\frac{1}{2}$ hours with Diaphanol is useful in giving stains better access to the worm tissues.

B.G.P.

- 726—WINDHAUSEN, R.—“Untersuchungen über die Lebensfähigkeit und Invasionsfähigkeit der Rinderfinne nach dem Gefrieren bei einer konstanten Temperatur von -3°C.” Giessen, Dissertation, 39 pp. [1935.]

Windhausen's experiments show that it is not sufficient merely to attain a temperature of -3°C. in order to render *Cysticercus bovis* uninfactive: that temperature must be maintained for at least one hour. Cysticerci show viability (bile test) after exposures up to 24 hours, but by the Iwanizky test they are no longer infective after one hour's exposure.

B.G.P.

- 727—WOLTER, E.—“Beitrag zur Biologie des Gänsemagenwurmes *Amidostomum anseris* (Zeder, 1800).” Berlin, Inaugural-Dissertation, 35 pp. [1935.]

Wolter discusses the incidence and epidemiology of *Amidostomum anseris* among geese in Germany. He describes the species and has made observations on the conditions necessary for the development of the egg and viability of the larvae. He has experimental evidence that the life history is direct, the pre-patent period being about 25 days.

P.A.C.

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NOTE.

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In the Index of Authors, joint authors are separately listed. Thus, "Jones, A. & Brown, B." would appear also as "Brown, B. with Jones, A."

In the Index of Subjects, alphabetization is under the first word (e.g., "*Acer* sp." before "*Acerina* sp."). Under the generic name of a helminth the following order is observed: Papers on the genus as such; papers on undefined species; papers on new and defined species, e.g.,

Capillaria
— spp.
— *aerophila*
— *amarali* n. sp.

In cross-entries under names of hosts, the specific names of new species of helminths are omitted. *Anthelmintics* are listed under that word and also under name of parasite and/or host.

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CORRIGENDA.

*Serial
No.*

- 19a (Title) Line 3 For "*Fascioloides magna*" read "*Fascioloidiasis magna*"
35a (Title) For "observations" read "observations"
68a (Title) For "MacCullum" read "MacCallum"
163a (Abstract) Line 8 For "*Rhaphidascaris*" read "*Raphidascaris*"
190 (Title) For "L'Aguillulose" read "L'Anguillulose"
196b (Title) For "filamente" read "filaments"
322a (Title) For "XLVIII" read "XLVII"
323a (Title) For "Präzipitationsreaktion" read "Präzipitationsreaktion"
376 (Periodical) Between "Batteriologia" and "Immunologia" insert "e"